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ABSTRACT

The monograph provides background information, questions and comments about current trends in development theory and practice and their impact on education. It is offered as a framework for consideration by policy makers, planners, and administrators in developing countries and in aid-giving agencies who are concerned with policies and programs to maximize human resource development. In view of the extremely wide range of resources and problems in the developing world, the propositions were necessarily stated in general terms and may be expected to have varying degrees of relevance in different nations. A preface, introduction, and summary are presented, as well as the following chapters: Current Concepts of Development and Their Impact on Education, discussing expanded developmental concepts, educational impact, and distinguishing characteristics of nonformal education; Reformulating National Education Policy For Human Resource Development, discussing sector reviews and policy questions. Appended material includes: notes on the text; a bibliography of 39 references, 10 of which are annotated; and, a listing of international research findings regarding nonformal education and literacy. (Author/LH)

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PROGRAM OF STUDIES
IN NON-FORMAL EDUCATION

Supplementary Paper No. 4

EDUCATIONAL ALTERNATIVES IN NATIONAL DEVELOPMENT

SUGGESTIONS FOR POLICY MAKERS

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Contents

PREFACE by Cole S. Brembeck 5

INTRODUCTION 7

CURRENT CONCEPTS OF DEVELOPMENT AND THEIR IMPACT ON EDUCATION 9

- Expanded Concepts of Development 9
- Impact on Education 11
- Distinguishing Characteristics of Non-Formal Education 15

REFORMULATING NATIONAL EDUCATION POLICY FOR HUMAN RESOURCE DEVELOPMENT 22

- The Process of Reformulation: The Sector Review 22
- Policy Questions for Consideration in the Sector Review 26
- Discussion of Policy Questions 29

SUMMARY 50

APPENDICES 53

- A. Notes 53
- B. Selected Bibliography 55
  - Annotated References 55
  - Other Bibliographic References 60
- C. Non-Formal Education and Literacy 62

Preface

This monograph is one of a series of studies produced in the Program of Studies in Non-Formal Education at Michigan State University. It is intended to be helpful to policy makers, planners and program managers who are concerned with meeting the diverse educational needs in developing situations with limited funds. It explores the available alternatives for educating people and provides guidance with respect to selecting appropriate educational modes and building effective programs.

In the preparation of the monograph the authors have drawn upon their considerable fund of personal experience, the previous publications in this series, and a considerable range of studies which focus on educational planning in human resource development. A select list of key publications in this area is annotated in Appendix B.

A brief word about the backgrounds of the authors will acquaint the reader with the perspectives from which they approached their task. Harry L. Case, Professor Emeritus of Michigan State University, has had long experience in development theory and practice and in educational planning, as Director of Personnel of the Tennessee Valley Authority, Chief of the Harvard Development Advisory Team to the Planning Commission of Pakistan, and Representative of the Ford Foundation in Pakistan and the Philippines. He was a member of the faculty of the College of Education at Michigan State University from 1967 to 1973, where he taught courses in educational planning, and was campus coordinator for a technical assistance project in Turkey on educational research and planning. In 1973-74 he was Technical Coordinator of the Public Service Review Commission of the Government of Nigeria, and has also served as Consultant to the Ford Foundation in a number of assignments in the fields of education and administration.

Richard O. Niehoff's long experience in public administration and rural development has provided him with relevant experiences as background for his joint authorship of this monograph. For more than ten years he served as Director of Training for the Tennessee Valley Authority and the Office of Price Administration. These positions involved the direction of non-formal educational activities for professional and other employees. He later served as Director of the United Nations Institutes of Public Administration in Egypt and Ethiopia. In 1960 he joined the faculty of Michigan State

University where he served as Professor of Education and Assistant Dean for International Programs in the College of Education. He later served as Assistant Dean for International Programs in the Office of the University Dean of International Studies and Programs. For twelve years Niehoff served on a full- or part time basis as Chief Advisor to the Ford Foundation-assisted Academies for Rural Development at Peshawar, Pakistan and Comilla, Bangladesh. In 1971 and 1972, Niehoff, along with Bernard Wilder, participated in the World Bank-supported Ethiopian Sector Review of Education. The results of their participation in the Sector Review were published as one of the Michigan State University *Study Team Reports* under the title of *Non-Formal Education in Ethiopia*.

The authors and I join in the hope that this monograph will be particularly helpful to officials in planning commissions, aid-giving agencies and government officials in education and nation-building ministries and agencies, particularly in developing countries, in planning educational programs which will respond to the expanding role of human resource development in developmental plans and programs.

Finally, we invite your attention to the list of publications in non-formal education which appears at the back of this monograph. Through the support of the Agency for International Development these studies, all published through our Program of Studies in Non-Formal Education at Michigan State University, are available free for distribution to interested persons. An order blank is contained in this publication for your convenience. We invite you to use it.

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1976

I
Introduction

This monograph is an attempt to examine the role of all the institutions of a society from the standpoint of their contribution, or their potential contribution, to human resource development–or to *education* in the broader meaning of the term that is implied in the concepts of learning systems, or a learning society. Human resource development through education is herein conceived as both the means and ends of social and economic development as exemplified in national or other development plans and programs. It is concerned with the basic development problems of societies and the central part which education can play in helping to solve these problems.

The monograph thus complements the focus of effort of aid-giving organizations in recent years in *institution building*. But it looks upon institutions in their *educational* roles. From this perspective all the institutions in a society, not merely those which are concerned with formal education, are considered as basically educational institutions. Institutions or organizations which use non-formal educational methods[1] necessarily function in different ways from the functioning of schools, colleges and universities, whose primary or exclusive function is education as it is typically understood. Because these non-formal educational organizations have other primary functions, their basic dependence on educational methods to achieve their purposes has been commonly neglected. It was only when the shortcomings of formal and non-formal educational institutions in helping to meet the critical problems of developing countries–such as food production, unemployment, inequalities in distribution of goods and services and related problems–became painfully apparent, that statesmen, scholars, and aid-giving agencies began to perceive that the total educational task is much larger, and the resources for carrying it out much broader, than had until recently been understood.

In the relatively few pages in which we treat this complex subject, we attempt first to highlight the expanded conceptions of development and their impact on education. In this section we refer to such changes in conceptions, derived largely from critiques of development theory and practice, which, in retrospect, have placed undue emphasis on increasing gross national product (GNP), industrialization and generally on urban development. The theory worked within limits, but did not lead to solution

1. See Notes, Appendix A.

7

of the problems of unemployment, caused in part by massive migration from the rural areas, nor of the unacceptable disparities in the distribution of economic benefits of increased GNP. Accordingly, "distributive justice" has been added in the past few years as a new dimension and measure of economic development. Likewise, the policies and actions affecting the rural sector dramatized by the "Green Revolution" bypassed myriads of small farmers and rural people who were essentially unaffected by programs which emphasized high-yielding crops, the more extensive use of fertilizers, crop rotations and mechanization which they could not afford.

The important implication of these changes for the basic thrust of this monograph is that some better methods need to be created to widen the involvement of urban and rural poor in various forms of educational activity designed to meet development goals, improve living standards, broaden the base of political participation and for other practical and humane reasons. The impact of these developments on education is briefly examined in terms of the dysfunctionality of much of what happens in formal school programs and the fiscal impossibility of a linear expansion of the formal system to meet the new needs and opportunities, even if the present programs were more relevant than they are. Because of the relative recency of the concept of non-formal education (sometimes taking on the aura of a panacea rather than an important dimension of a total educational program) we examine the nature and characteristics of non-formal education in terms of process, teaching method, motivation, appraisal and other characteristics. The wide range and types of actual and potential activities under different sponsorships are also described.

The factors and considerations noted above form the background for the questions, comments and recommendations in Part III, which are addressed to a broad range of policy makers in and out of governments in third world countries who may wish to find better ways of integrating formal and non-formal education in a national policy and program of education. In this part we advocate the use of sectoral reviews of education as a *method* of achieving the desired goal of creating a national policy and program. Questions and discussion of the questions, which could form possible terms of reference of such reviews are addressed to formal education and to non-formal educational programs of government agencies, the military, private industry and other private organizations.

The main points of the monograph are summarized in Part IV.

II

Current Concepts of Development and Their Impact on Education:

Nature and Role of Non-Formal Education

Expanded Concepts of Development

One of the most significant changes in the theory and practice of development, which has profound implications for education, may be described as the "demise of the GNP" concept, i.e., the repudiation of the assumption that if the gross national product is increased, the benefits of such increase somehow automatically "trickle down" to large numbers of people. Although a good case has been made for this strategy for some economic and political environments, the consensus of informed opinion now is that the strategy is not particularly effective in third world environments. The strategy places too much emphasis on the development of capital and on industrialization and insufficient emphasis on food production, employment and other benefits to the total population, much of which is in the non-monetized rural sector. Experience of the past twenty or more years has revealed that an insufficient number of new jobs were created in the cities which, combined with migration to the cities from the countryside, has led to massive unemployment or underemployment and considerable political unrest. Furthermore the emphasis on accumulation of investment capital rather than distribution of earnings in the form of wages or lower prices raised serious questions about "distributive justice." Labor-saving production practices, rather than labor intensive practices, exacerbated the unemployment problems. Insufficient use was being made of public works and other labor intensive programs designed specifically to relieve urban unemployment or the plight of the landless laborers. The hopes of leaders and masses of citizens alike, expressed in excessively optimistic slogans such as the "Development Decade" remain depressingly unrealized. The "tide of rising expectations" hasn't resulted in actual social and economic achievements of sufficient magnitude to satisfy the masses. And meanwhile, population increases in many countries have absorbed all

or most of the economic increases which were attained, putting many economies on a treadmill of development.

The rural equivalent of the excessive confidence placed on increase of the GNP has been an excessive confidence in the "Green Revolution." Although the miracle varieties of grains combined with large increases in the use of fertilizer, irrigation and other practices, have increased dramatically the yields of these crops, the increases were insufficient to provide enough basic food for all the people, or to improve minimal nutritional standards. Furthermore, the use of the miracle seeds and the increased investments in fertilizers, pesticides, irrigation systems and other inputs, have bypassed massive numbers of small farmers who could not afford the additional investments, or take some of the risks potentially associated with the adoption of the new practices. The mounting food deficits which could only be met by larger expenditures for food imports or greater dependence on gifts and grants from external sources have created economic and political problems of disturbing magnitude. The spectre of starving millions in some countries emerged as the prime problem facing the stability of governments.

A closer look at the rural sector, often neglected during the pursuit of the drive for greater industrialization, has revealed new problems, or highlighted old ones which plague the areas where most of the people in developing countries live. Rural unemployment and underemployment have come under closer scrutiny. The problems of land reform are highlighted and pressing for solution—in some countries to revolutionary levels. The need for improvement in rural infra-structure (roads, water systems, and other labor intensive projects) is being seen as significant and worth greater allocation of national resources. The excessive migration of rural people to the cities has stimulated a greater concern for developing rural industries as sources of employment and to improve the availability of goods and services particularly beneficial to rural people. The weakness, or in some instances the virtual nonexistence, of local government (beyond law and order functions), and the generally lower level of public service in the rural areas have not been overlooked in the "rediscovery" of the importance of the rural sector.

Concurrent with all the above has been an increase in political unrest and in pressures on governments to find more satisfactory solutions to problems of hunger, disease, unemployment, malnutrition and all the attendant depressants of the human spirit. Fortunately there now appears to be a greater realization of the importance of *human needs* as the prime focus of political effort and *human resources* as the central ingredient of hope for meeting the needs.

The list of important trends and considerations which form the background for increased interest in education, and more specifically non-formal education, as a possible source of significantly increasing the participation of rural people in finding better solutions to problems, could be extended.

Impact on Education

The reappraisal of development concepts and policies, combined as they are with stringent financial constraints, food shortages, political unrest, the ravages of unchecked inflation and other pervasive societal forces facing government leaders, has also been reflected in a reappraisal of the role of education in development. But although there is a growing consensus regarding the validity of past generalizations about the deficiencies of formal education, particularly in developing countries, there is not yet any general agreement about the interpretation of the facts and their implications for educational reform, and particularly about the potential role of non-formal education in finding more viable solutions. The authors, however, do not advocate non-formal education as a panacea for the solution of development or educational problems. Non-formal education, in our view, must be seen as a part of a *rational* program of education which is broader in scope and more flexible in approach and method than has been generally characteristic of formal educational systems. Furthermore, increased attention to non-formal education has the potentiality of bringing education more fully into the mainstream of human resource development and may, indeed, have profound implications for what happens in the formal schools.

Partial surveys, or more comprehensive sector reviews of education, recently exemplified in the Ethiopian Sector Review of Education,[2] have highlighted a number of significant observations and conclusions which shape the framework of non-formal education. Although it is difficult to pinpoint the most important single generalization, because they are all interrelated, the overall criticism of formal education is that it is in many respects *dysfunctional* in its contribution to the solution of broad social and economic problems, except for the training of a relatively small number of students in the elitist tradition, who ultimately take up the key positions in government, business and industry. Some of the dysfunctionality is traced to colonial traditions when the school system was used for more limited purposes. But much of the dysfunctionality has persisted long after the colonial governors have left. Vast numbers of citizens in developing countries are never true beneficiaries of the formal school system. For the relatively small percentage who do enroll (and a smaller percentage of these are girls), a discouragingly large number drop out before attaining

functional levels of literacy and numeracy. Furthermore, we find large numbers of unemployed graduates, including university graduates, of the formal programs.

A close look at the large and increasing costs of formal school systems has led to the conclusion that the solution of development-education problems does not basically lie in the extension of the formal school system to include greater numbers, or a higher rate of those going on into the upper grades, including universities. Lack of available funds for education in the budgets of developing countries, combined with increased pressures to allocate more resources to solve problems of food deficits, unemployment, excessive population increases, low levels of health and other social services, simply do not allow for a linear increase of budgets for formal education. National policies and strategies of education must take these facts into account and foster national programs which: (1) produce needed numbers of persons who can take responsibilities which require higher levels of cognitive information and skills for the performance of jobs in government, the professions and industry, and (2) provide a much wider range of educational opportunities to the masses of citizens, most of them in rural areas, which are related to the solution of problems of survival, e.g., food, health, population control, and increased participation in the larger dimension of national aspirations.

The concept of non-formal education now coming into focus on the development scene is propitiously timed for two highly practical reasons: (1) the widespread recognition by political and educational leaders, particularly from developing countries, of the deficiencies and dysfunctionalities of formal school systems, and the fiscal impossibility of extending the systems in their present outlook and programs to reach the masses of citizens as well as to train that portion of the populace who are needed for highly skilled professional, managerial and policy positions; and (2) the necessity of finding more effective educational methods to motivate and train thousands of villagers and townspeople, mostly illiterate and unskilled, to participate more effectively in development programs designed to increase agricultural production, improve health standards, adopt family planning practices, increase industrial production and similar objectives. Furthermore, it is being more widely recognized that these masses of people are *decision makers* whose participation in development programs cannot be deferred until they are literate. Thus training and development must somehow go hand in hand.

In addition to recognition on the part of political and educational leaders in developing countries of these summary generalizations, external funding and technical assistance agencies have relatively recently clarified

their policies and are now giving priority to development project. designed to increase the participation of the masses for the purposes indicated above, as well as for better distribution of income and increased participation in political processes generally. Particularly cogent illustrations of these changes, which are designed to aid and abet these new approaches to education and rural development, are found in the "Sector Working Papers" on *Education* and on *Rural Development* published by the World Bank in December, 1974, and February, 1975, respectively. Similar policies have been enunciated by the Agency for International Development, the Rockefeller Foundation and other foundations, the Food and Agricultural Organization of the United Nations and other development assistance organizations. Likewise, educational organizations and commissions, such as the International Commission on the Development of Education,[3] and leading students are considering education in a wider spectrum than has heretofore been the case.[4] Thus it is not too optimistic to believe that more viable and realistic national policies and strategies of education can be devised which incorporate non-formal education into an all-embracing plan to achieve a more comprehensive set of developmental goals and purposes.

The task of combining observations on significant trends in development theory and education attempted above, as background for the formulation of policies and strategies for national educational-developmental plans, is fraught with many hazards. Although most of the criticisms and generalizations about development concepts and educational practices are reasonably irrefutable, there is ample scope for differences of opinion regarding the specific elements of policy and strategy which responsible leaders in developing countries might pursue. Thus it is probably relevant for the authors to indicate early in this monograph their biases and convictions with which policy makers and practitioners might disagree. But agreement or disagreement is less important than the need for hard and sustained thinking by persons in responsible positions who do *sense a need* for creating national policies and strategies for education which integrate the strengths of formal and non-formal education in an all-inclusive framework.

We believe, fundamentally, that education and development can best be fostered in a framework in which human resources are considered paramount, as Frederick H. Harbison has said in his *Human Resources and the Wealth of Nations*.[5]

Public policies and programs must be strongly colored with a concern with their human resource implications, and should be evaluated in these terms. Moreover, there must be a consistency between educational objectives and the public policies and practices which affect the way people live.

Thus an educational objective to develop independent and responsible citizens is futile in a society whose administrative and political policies and practices do not cultivate access to information and resources on which responsible actions can be taken. Education and life are all of a piece.

We are aware, as Harbison stresses, that this problem of integrating education into the context of national development is probably the most difficult of all problems in the development process. In the rural sector the immense complexity of the task is illustrated by the difficulties experienced by a group of international experts convened at the Massachusetts Institute of Technology to advise a hypothetical Minister of Agriculture on formulating a policy for increasing agricultural production in a developing country. Their frustrations in the effort are described in an insightful volume under the title of *No Easy Harvest*.[6] Nevertheless, the task should be attempted.

Much of what has to happen in developing countries must be accomplished within the limitations of massive illiteracy—which is not to be confused with lack of intelligence. As a matter of fact, there is considerable evidence that illiterate persons are highly cognizant of the key problems involved, and their insights must be sought as a basis for the formulation of programs in which their participation is critical and to which national and external resources are to be made available for their solution. In short, the achievement of many key national goals such as food production, population limitation, distributive justice, and national integration cannot wait, as indicated before, until all adults are literate.

Furthermore, the achievement of these primary goals cannot be accomplished in short-term "crash" time frames, regardless of the political or other urgencies involved. Fundamental changes should be projected in time frames of ten or more years, with annual or more frequent checks and adjustments made in accordance with realistic measures of accomplishment. Because of the complexity of the problems to be solved and our severe limitations of knowledge about viable solutions, well-considered, monitored and researched pilot programs are advocated which may show the way (with the possibility of experiencing small failures and thus avoiding larger failures on a more massive scale) to more viable long-term solutions.

Although the frustrations and pressures for quick solutions involved in achieving what is projected may often tempt leaders to resort to force and coercion, the authors believe that persuasion and leadership are the keys to long-term solutions. In fact, clearly no other method is consistent with the objective of human resource development.

Furthermore, the authors are not unaware of the fact that genuine solicitation of opinions and encouragement of active participation by many

individuals and groups previously bypassed in developmental processes may sometimes lead to unanticipated and disconcerting results. As a case in point, the "Peasants Association" of Peru, which was fostered by the government, told the universities that they were not addressing themselves in their research and instructional programs to the real needs of the masses. Thus, unless new and more just methods of making credit available to farmers are devised, genuine land reform measures initiated, viable cooperative organizations created, and public works undertaken to maximize the participation of local organizations of subsistence farmers or unemployed urbanites, non-formal education programs which do not take these needs into account are likely to be repudiated. Some of these socially useful and necessary changes in development and education practices may create temporary or more long-lasting dissension and conflict, possibly even to revolutionary dimensions. Education, development and political leaders must be willing to support some of these changes in order to achieve sound, constructive and long-lasting results.

Distinguishing Characteristics of Non-Formal Education

Having noted some of the major trends and concepts regarding the relationship between development and education, and having stated our own biases related thereto, we will now examine some of the major distinguishing characteristics and the scope of non-formal education. These materials will provide further background for considering some of the choices which face policy makers and administrative officials in top governmental planning and coordinating offices, in education and in other nation-building ministries. These policy and administrative choices are developed in Part III.

Educational Process

Non-formal education is a deliberate process of communicating ideas and developing skills in adults and out-of-school youth which will help them increase agricultural production; qualify them for, or increase their performance in, positions in government, industry and commerce; attain higher health standards; participate more intelligently in civic, economic and political groups; and achieve other personal and social goals. The types of activities are extremely varied, highly focused on specific learning objectives, and of varying duration.

Sponsorship

Most non-formal educational activities, particularly in developing countries, are organized by private and public organizations *outside of the*

formal school system, although some change in this generalization is being made in a few countries.[7] A major exception is the conduct of literacy programs by the schools. It is increasingly being recognized, however, that literacy programs can best be fostered in association with, or as an adjunct of, programs focused primarily on development processes. The fact that non-formal education is usually sponsored outside of the school system raises policy questions about relationships between ministries of education and other "nation-building" ministries and private organizations as to coordination, finance and integration of these policies and activities into a *national plan of education*.

Locale

The "classrooms" for most non-formal education activities are the fields, village centers, factories and other work places of adults and out-of-school youth. The problems, work processes, skills and disciplines associated with practical work become the subject matter of much of the non-formal educational activity.

Nevertheless, there are no compelling reasons why public school facilities and the involvement of public school teachers could not be creatively planned in such a way as to serve more widespread educational purposes—formal and non-formal.

Clientele

Whereas the participants in a formal learning situation are literate, or expected to become so, a large percentage of the clientele to be taught by non-formal methods will be illiterate or semi-literate, where literacy is not necessarily a primary objective. Illiterate persons may have more insight into the problems to be solved than the designers or teachers of programs to solve the problems, and it is these basic insights which must be sought out and utilized if the educational programs are to fit the needs of these persons. The lack of literacy does, however, impose constraints and difficulties in imparting knowledge or developing skills, and the arguments for literacy programs for all are very cogent. Yet this is one of the most frustrating areas of non-formal education where there seem to be more failures than successes. Because of the importance and complexity of the problem we present a summary discussion of the subject in Appendix C.

The clientele of non-formal education may also be expected to suffer from a poor self-image as to their ability to learn at all, either because they have not been to school, or because they have been judged as failures in the formal school system and have dropped out. This factor needs to be taken perceptively into account by developmental "change agents" in designing non-formal educational programs. The question of self-image,

along with other elements of motivation, is one to which social science research might well be directed in the developing countries.

Purpose of Teaching-Learning

Whereas the principal purpose of teaching in formal settings is to develop cognitive skills, numeracy, social awareness and a broadening of the mind often referred to as general education, the major purpose of teaching by non-formal methods is acquisition of immediately useful knowledge and skills and the adoption of new practices, with emphasis on the achievement of behavioral changes. Although development of cognitive skills may be expected to occur along with acquisition of practical skills in non-formal programs, the acquisition of such knowledge or skills is more directly tied to the specific present needs of the learner and to practical and immediate end results than is characteristic of formal education.

Teachers

Teachers in formal systems of education are so identified and are certified as such by some accrediting body. Teachers in non-formal education settings come from varied backgrounds, e.g., government servants in the fields of agriculture, health, family planning, etc., and are not certified as "teachers." Furthermore, many of them, somewhat irrelevantly in terms of the function they perform, may not think of themselves as teachers. Nor are the local leaders and others whom they may involve significantly in development programs as model farmers, cooperative organizers, public works managers, or other change agents, thought of as teachers. This fact raises difficult questions about how change agents, who are basically *subject matter specialists* or influential local leaders, can be made more effective teachers in a "*pedagogical*" sense. It may be doubtful if the methods used to train and qualify teachers in formal schools have much applicability to the training of teachers in non-formal education methods, but research may reveal more common denominators than are readily apparent. The answer may lie in efforts to diagnose basic facts about how people learn and how they can best be taught in varied situations and with varying backgrounds. This type of problem could presumably best be researched by university interdisciplinary teams, the members of which have backgrounds in psychology, sociology and other social sciences and have some interest in learning theory and practice, working in collaboration with development practitioners. The emphasis would be on a "grass roots" type of learning and on methods of improving the educational processes involved.

Group Learning

Although formal and non-formal education both involve groups in the process of teaching, there is one major distinction involved between the two. In formal education, even though a classroom group is involved, the *individual* is presumably the target of the instructional process, whereas in non-formal education the *group as a whole* is more often the target of instruction, and the responses of the group are the more significant factor. To be sure, the adoption of progressive practices in agriculture and other fields by *individuals* is important, but the achievement of some objectives such as the operation of an irrigation scheme, a marketing system, a cooperative credit system, the building of a community center and similar activities may be *impossible without group action*. The Chinese system of work-teams, brigades and communes, and the Israeli kibbutzim, combining as they do both educational and action-type programs, are possibly the best current examples of the importance of the group in the accomplishment of developmental aims.

Methods and Media of Instruction[8]

From the above observations it is apparent that non-formal education will necessarily have to rely to a greater extent than does formal education on oral, graphic, and demonstration methods for presenting ideas and developing skills. Fortunately villagers and others have, it is believed, an acuity for absorbing ideas expressed orally and graphically, if the messages are directed to their urgent needs and interests. The use of radio and other mass media has been found to be most effective, if used *in conjunction with oral presentation*, group discussions, community meetings and similar activities. Other devices, such as group dynamics, role playing, radio-farm forums, use of films, film strips, displays and exhibits, and many other modes of communication are useful, including indigenous folk systems of communication, such as village singers, dramas, puppeteers, recitations and other folk art forms. Also, closer collaboration is undoubtedly needed between public radio and television organizations and other governmental agencies and the public schools in order to effect economies and to achieve better educational use of such programs and facilities.

There are various types of non-formal education which closely resemble formal educational methods. These activities are largely confined to the urban sector and are focused on the development of skills for participation in industrial or commercial processes. Examples are pre- and in-service training of industrial workers, airline pilots, nurses or others outside of the formal school system. These programs frequently require a level of literacy and numeracy beyond that required for agricultural and other rural

development programs. They often have prescribed curricula, formal instructional processes, graduation, certification and other conventional features of formal education. Trainees for these programs are typically "tapped off" the formal school system at 6th, 8th, 10th, or other grade levels. Generally speaking, industries and commercial establishments in urban areas are able to devise programs to meet their needs, to relate more closely with, and to influence the programs of the formal school system.

Motivation

Although all learning, formal or non-formal, depends in the last analysis on the motivation of the learners, non-formal education to be effective is probably more dependent on motivation of the learner than is characteristic of formal education because:

(1) The usual "props" of formal education (classrooms, teachers, grades, examinations, etc.) which tend to carry students along who may not be highly motivated, are not typically present in non-formal education situations. Accordingly, participants in non-formal education activities can more easily turn off the "learning message" if it does not appeal, or if it is considered unrealistic, or is in conflict with important social or individual values, or is simply irrelevant. The requirement of a higher degree of motivation of the participants to learn and the more rigorous requirements on the teachers to teach in non-formal education settings may indeed be an asset in the learning process. Furthermore, feedback from participants as to the methods of instruction and persuasion which are attempted may require an alteration of methods to find the most effective approach to achieve the desired results.

(2) As indicated earlier, many of the potential participants in non-formal education activities are illiterate, depressed, and understandably skeptical about the adoption of ways of thinking or acting which are novel. Thus they start the induced learning process from a somewhat different perspective, and the teachers are probably more dependent on the learners' motivation than are the teachers in formal education settings. And whereas rewards for participation in formal educational activities are somewhat deferred and long-range (except for passing tests and being promoted to higher grades), rewards for participation in non-formal activities are more immediate. Thus the farmers who produce more food, the individual workers who gain more competence, reflected in higher wages or better jobs, or the families who have adopted family planning practices and have more resources to use for present members of their families, experience a more immediate pay-off for their participation in non-formal educational activities.

Availability of Supplies and Materials

Introduction of new behavioral patterns in non-formal education settings is frequently dependent on the availability of materials or supplies, e.g., new seeds, fertilizers, machinery, and family planning supplies. Formal education programs are of course similarly dependent on availability of books and other teaching materials, but the problems of logistics for non-formal educational programs are likely to involve more complex questions of planning and coordination than in formal school systems.

Appraisal of Non-Formal Educational Activities

The significant differences in the clientele, objectives, methods of teaching, and other factors between formal and non-formal education are reflected in differences in criteria for and methods of appraising results. Whereas formal education is generally directed toward the achievement of sequenced and measured units of cognitive learning, non-formal education is more concerned with changes in individual and group *behavior*. Appropriate appraisal measures are, accordingly, needed to measure individual and aggregate changes in behavior. But in many, if not most, development fields, attitudinal changes precede behavioral changes. The creation of these attitudinal changes is an essential part of the non-formal education process and must be included in any appraisal.

Furthermore, whereas formal education is essentially concerned with *deferred values*, programs of non-formal education need to show more *immediate* results in order to be judged effective. The problem of appraisal of formal education is in many respects more difficult for this reason. Moreover, there appear to be no means of evaluating such intangible functions of the schools as, for example, what value to place on their "custodial" function, i.e., keeping youths out of the labor market which doesn't need them.

In view of the fact that many non-formal educational activities involve group decisions and behavioral changes as well as individual learning, appropriate appraisal techniques need to be devised to capture and record these changes. For example, basic changes in agriculture, especially by small farmers, are likely to involve capital formation and credit arrangments by groups, group involvement in irrigation schemes or public works, and other activities which require group action to be feasible or successful. Baseline surveys, before and after studies, are appropriate for this type of appraisal.

The appraisal of non-formal educational activities, like that of formal educational activities, requires a range of techniques applied at different stages of the activity by teachers and directors, as well as by research or external appraisal groups. The important point is that the appraisal techniques be as simple or as complex as the data require to measure what is

happening. Because of the variables noted above, considerable innovativeness is required to appraise non-formal activities beyond the simplest criteria.[9]

Although the above highly abbreviated comments on similarities and differences between formal and non-formal education, and on types of non-formal education, are not complete or exhaustive, it is hoped that they will provide sufficient background to help illuminate some of the complex policy issues and alternatives which face leaders in education and the several other developmental fields in the creation of comprehensive national educational plans and the organizations, policies and procedures which are necessary to implement the plans.

III

Reformulating National Education Policy for Human Resource Development

The Process of Reformulation: The Sector Review

Nature of Sector Reviews

Because of the great variability in the factors involved in formulating a national education policy and plan for human resource development–economic and social goals, political systems, historical influences, leadership, available resources and other such factors–the authors do not propose to offer prescriptions as to how to do the job. The process of assembling and assessing the relevant facts and formulating alternative strategies to accomplish a better use of all available educational resources is more important than specific details. The fundamental starting point is the *belief* that a better educational policy and program can be devised than is currently in force and the *will* to set in motion a *process* of creating a revised policy and program. It is in this spirit that the following questions are raised and comments and suggestions are offered.

Our major recommendation for integrating formal and non-formal education in a national educational policy, with emphasis on human resource development, is that governments plan and conduct comprehensive sector reviews of all educational policies and programs in their countries. Such inventories would need to cover both the policies and administration of educational resources, as well as other aspects of public policy and resource allocation which are not commonly thought to be related to education at all, but which in fact go a long way toward determining whether educational policies are to be meaningfully implemented.

Although the comprehensiveness of the surveys will depend on variables such as size of the countries, scope of educational activities, language problems, recency of reviews of the formal educational system, and availability of relevant statistics and other data, the closer the reviews can come to encompassing all or most of the relevant factors, the more realistic and workable revamped national policies and plans will be.

The theory and methodology of the sector review approach is discussed in depth in Frederick H. Harbison's *Education Sector Planning for Development of Nation-wide Learning Systems*.[10] The range of research and action involved in a full consideration of national education policy and programs as set forth by Harbison is formidable indeed, but policy decisions and modification of action programs need not await having answers to *all* the questions that ultimately should be asked. Once it has been determined that educational policies and programs need to be redefined, initial efforts can be directed at examination of clearly implied major questions of administrative policy: areas where there are clear lacunae in providing the kind of realistic and functional education which is needed to achieve national goals; areas where there are clear inefficiencies due to lack of coordination among agencies at specific points of application of educational activities; areas where pilot experimental-demonstration projects are needed to provide a documented base for expansion of activities on a regional or national basis; and areas of needed research on critical problems related to learning by a wider spectrum of people, literates and illiterates.

Another important source of guidance for conducting sector reviews or sector analyses is the Sector Review, previously referred to, which was launched by the Government of Ethiopia in 1972. The review was launched at the highest levels of government; it was under the capable direction of a person not part of the Ministry of Education; the members of the task forces which produced the basic working documents of the review were almost exclusively Ethiopians, and the review was conducted in a remarkable spirit of candor. Financial assistance and some guidance were provided by the World Bank. In broad terms the purposes of the review were to:

1. "Analyze the education and training system of Ethiopia and its capability for promoting economic, social and cultural development;
2. "Suggest, wherever necessary, ways to improve and expand the education and training system in order that it might achieve aims relevant both to the society and the overall development of the country;
3. "Suggest ways in which education could best be utilized to promote national integration;
4. "Identify priority studies and investments in education and training."[11]

Other models may be suggested by local UNDP, UNESCO, AID or other external funding agencies which have had experience with the sector approach. The World Bank also has guidelines available for countries that wish to consider undertaking sector reviews. These may be secured from UNDP or World Bank Representatives in countries where these organiza-

tions have field representatives, or directly from the World Bank headquarters in Washington, D.C.

It is important in this discussion of sector reviews of education to emphasize that we are using the term "sector" in a somewhat unconventional sense. The education sector, as here conceived, is in fact, inter-sectoral and encompasses education in whatever sector (including formal education) where educational methods are used primarily or incidentally to achieve the purposes of the sector, whether they be agricultural production, improvement of health standards, organization of rural cooperatives or whatever.

Organization of Sector Reviews

Although there is considerable flexibility in the approach to and scope of sector or inter-sector reviews, the organization and structure of such reviews involve certain common elements. These include: (1) a high level, broadly representative national commission; (2) a professional director; (3) working task forces to assemble and interpret relevant information and to make recommendations; (4) structured deadlines and review procedures; and (5) terms of reference for the whole review and for the task forces. Our more specific suggestions for the first four requirements follow. Our suggestions for consideration in formulating terms of reference are offered in the Section "Policy Questions for Consideration in the Sector Review."

Education Commission

To provide prestige, guidance and practical wisdom to the review, a high level national education commission should be appointed, preferably by the Prime Minister or equivalent administrative officer. The membership should be representative of: (1) the major units of government whose programs are particularly dependent upon the use of educational methods to achieve their purposes—Ministries of Education, Agriculture, Health, Community Development, and other "nation building" ministries; (2) private industries and para-statal organizations; (3) mass media, notably radio, television, presses and publishing houses; (4) universities; (5) planning commissions; (6) citizen groups such as peasant associations, labor unions and cooperatives; (7) Ministry of Finance; and (8) private educational, cultural and development organizations, particularly if they play an important part in conducting non-formal education programs in the country.

The Chairman of the Commission should preferably be a person of demonstrated leadership and administrative qualities, not personally involved in any of the organizations represented on the Commission, such as a supreme court judge, or a person of comparable stature. He may be expected to spend from one-quarter to one-half time on the assignment.

Director of the Review

The Commission and Chairman need to be aided by a Director of the Review, who will be responsible for the organization and direction of the task forces (see below). The Director should be a person experienced in the organization and direction of research. He should be assigned full time for the duration of the review and immediate follow-up actions.

Task Forces

Operating under the Director of the Review should be four to ten task forces which will secure and analyze facts and prepare tentative recommendations in their respective areas of assignment. The task forces, of possibly five to seven members each, should be made up of some members who are particularly knowledgeable about the subject matter in question, plus representatives from organizations which are closely related functionally to the major subject matter of the task force, or which use the services or activities involved. Thus a task force on mass media, for example, would include key officials of radio, TV and other mass media, plus representatives of the Ministry of Education, Health and other such organizations representing users or potential users of mass media educational programs. Other members of the task force could also include persons from universities and private organizations as relevant. Each task force would have a chairman. The task forces would operate within frames of reference (involving common elements such as basic program descriptions and statistics, plus elements which are peculiar to the special subject matter areas of the task forces) provided by the Director of the Review and approved by the Commission.

Members of the task forces would be appointed or deputized full time in the stage of collecting and analyzing data and preparing recommendations, and should be available subsequently for participation in plenary sessions or other activities as necessary.

Timing and Scheduling

Deadlines should be established by the Commission for completion of the work and appropriate sub-deadlines and schedules for review of the work of the task forces should be established by the Chairman and Director of the Review to conform to the completion date. Although there could be considerable variation in the duration of the reviews, in general reviews should be completed and recommendations for policy and program adjustments made in the shortest possible time consistent with the preparation of a factual base for wise decision-making. In no case should the review take more than one year.

Technical assistance of an advisory or financial type may be requested from external multilateral or bilateral agencies as desired. In all instances, however, the review should be essentially an indigenously staffed and operated effort.

Policy Questions for Consideration in the Sector Review

The big questions on which data are to be assembled and reviewed and recommended answers prepared constitute the essential substance of the terms of reference for the Review as a whole and for the more specific assignments to the task forces. The Director of the Review (working closely with the Chairmen of the task forces, the Chairman and other Commission members) would, presumably, take initial responsibility for formulating the basic questions and grouping them together as appropriate for each of the task forces. The following questions should, we think, be asked, but of course do not constitute a definitive list. The comments similarly are intended to be suggestive, and are certainly not prescriptive.

Development Plans Related to Formal and Non-Formal Education

What financial, political, or other factors support a reappraisal of education at this time?

What new program goals formulated in recent national development plans require a greater emphasis on education to realize the goals?

What are the existing formal and non-formal educational resources which are *not* being effectively used?

Is a dual system of education, formal and non-formal, feasible or desirable?

Are non-formal educational activities designed for "second class" citizens who, for whatever reasons, did not or do not succeed in formal education?

Would the formal education system be downgraded by directing attention, funds and personnel resources to out-of-school learning?

Would an expansion of non-formal education activities be competitive with or complementary to formal education?

What advantages might be expected in a policy which integrates formal and non-formal education? What disadvantages?

Budgetary and Financial Questions and Priorities

To what extent are plans and budgets for expansion of the formal education system based on demonstrated need and a consideration of alternative methods of accomplishing the same purposes?

What will be the costs of the extension of formal education under different assumptions related to compulsory education levels, retention levels, teacher-pupil ratios, teacher salaries, specialized curricular programs and related questions?

Assuming that there are insufficient resources available to finance extensions of formal education and to provide more adequately for non-formal educational activities and the expenditures for materials and supplies related thereto for agriculture, public works and other programs involving the masses, what criteria might be devised to make more effective resource allocations for both types of programs?

How can policy makers really determine what the genuine preferences of citizens are for public expenditures for formal education at different levels and for non-formal education which often involve related expenditures for materials and supplies?

Reforms in Formal Education

What efforts are being made, or should be made, to reform formal education to make it more relevant to social and economic needs?

How might non-formal education have a healthy influence on formal education?

How can formal and non-formal education be more closely integrated?

The Problem of Accreditation

To what extent does the formal education system exercise a dominant control over eligibility for employment and advancement in the private and public sectors?

How could such control be reduced in the interests of efficiency and equity?

How can more creative tests of educational achievement be devised, or utilized, as substitutes for conventional measures?

Role of Universities

What should be the role of the universities in a program of maximum development of human resources? How can they be brought more effectively into the mainstream of the development effort?

How can university research problems be focused more sharply on current and urgent societal needs?

How can results of research on indigenous agricultural, health and other problems be made more usable for local agents to fit into non-formal educational programs for the masses?

Training of Change Agents

To what extent are local agents of development programs trained for their educational role?

How can local agents (change agents) be encouraged in the design of educational programs to listen to and learn from participants?

How can local leaders be more widely used as model farmers, managers, and community organizers by government change agents to reach more participants and reduce costs of educational programs focused on development problems?

How can the total educational effort at the local community level be more effectively integrated?

Role of Mass Media

Does national policy identify the educational role of the national and provincial (state) sponsored media as distinguished from their public relations role?

What measures might be taken to strengthen the educational role of the media?

How can mass communications be improved by "feedback" techniques?

Occupational Training in the Private Sector

To what extent do occupational training programs of private employers duplicate the efforts of formal education?

How could such duplication be reduced?

The Military

To what extent are occupational training programs of the military integrated into the national educational system?

Are there any general lessons that can be drawn from the experience of the military in the education of its recruits?

Voluntary Agencies

What are the lessons to be drawn from the experience of voluntary agencies in non-formal education?

Public Service Employment

To what extent does public service employment provide a working environment conducive to maximum development of human resources?

Decentralization of Administration

To what extent does national policy identify the importance of local institutions as instruments for development of human resources?

What specific steps are being taken to build up local institutions?

Organization

What are the organizational implications in adopting and implementing a comprehensive national education policy?

Discussion of Policy Questions

Development Plans Related to Formal and Non-Formal Education

In broad terms, it is reasonable to assume that the formal school system should perform those functions which it has the demonstrated competence to perform; the non-formal system should carry on those functions which it performs well. Each system should be strengthened in its respective areas of competence.

The question is not one of creating a new type of education, nor is it one of establishing a dual system in which formal and non-formal education are set up in a posture of competition or confrontation. It is simply a question of recognizing that education is much more pervasive in society, and has much more varied manifestations, than would be supposed from traditional uses of the term education. More attention needs to be given to non-formal education, not because formal education is not important, but because non-formal education has been neglected by governments and by students and practitioners of education, as has been set forth earlier in this monograph.

Actually, nothing is new about non-formal education except for the invention of the term, which is quite recent. In human history non-formal education antedates formal education by millenia. Education, in fact, did not become institutionalized in any society before relatively modern times, and even in advanced societies was available to no more than a tiny percentage of the population only in the 20th century. What is really new, but has not been observed or examined critically until very recently, is the fantastic growth of formal education in virtually all nations of the world, so that formal education now represents in many countries the biggest industry, the largest employer, and the largest item in the national budget (in some cases, exclusive of the military). The new question is—to what extent can the older methods of education be brought to bear upon urgent social and economic problems, and what are the respective roles of formal and non-formal education in national development?

Budgetary and Financial Questions and Priorities

Many developing countries are spending between 15 and 20 percent of their national budgets on formal education, and between 4 percent and 5

percent of the GNP.[12] In terms of government budgets, this is very high compared with expenditures by developed countries, although not high in terms of GNP.

The real problem in the developing countries is that despite very large expenditures on formal education, many are in fact losing ground in terms of school enrollment and in minimum educational accomplishments. One measure of this is the number of illiterates, caused in part by the large number of students who drop out before reaching grade four. In terms of present trends, which assume a continuously rising percentage of GNP devoted to formal education, it has been estimated that 30 percent of adults, world-wide, will be illiterate as of 1980, and that there seems to be little prospect that more than one half of the citizens of developing countries will have benefited from the advantages—limited as they are for the great majority—of any kind of formal schooling.

Probably no one believes that expenditures on formal education are likely to be reduced. But the rate of expansion of such expenditures may be reduced pending a better understanding of the alternatives. It is difficult to disagree with the International Commission on the Development of Education that "we must decide what proportion of the additional increment should be used to develop and perfect formal school establishments and what amount should be allocated to other needs, especially to adult education, pre-school education and the development of educational technology." Nor, it should be added, what funds being proposed for formal education systems might better be directed into other forms of development expenditure, without which even the most theoretically useful knowledge is unavailing.

For despite demonstrations of the economic value of formal education for those who obtain it, it has never been demonstrated that education *per se* creates jobs. The developing world is all too familiar with the fact of unemployed engineers, unemployed doctors, lawyers, accountants, and other trained personnel. Nor does education alone guarantee improved performance. A farmer who knows what fertilizer or pesticides ought to be applied is helpless unless the fertilizer or the pesticides are, in fact, available. The resources for development must be allocated on a rational principle that takes into account all the elements—of which education is *one*.

Criterion of Necessity

It is necessary to take a hard look at the question: where is formal education a necessity, and where is it a luxury, in the face of alternative allocations in the development budget? For many years since the UNESCO conference of 1960 it has generally been accepted that elementary school-

ing for all should be set up as a national objective, while recognizing that achievement of this objective may still be a long way off for many nations. Assuming that universal primary education continues as a national goal, nations may find it desirable to be guided by the principle set forth by the World Bank in its Sector Working Paper on Education, previously referred to, that "Further education and training should be provided selectively to improve, both quantitatively and qualitatively, the knowledge and skills *necessary* (italics provided) for the performance of economic, social and other developmental roles." It is true that those with more formal education do, in general, get the better jobs; but this does not prove that the increased amount of formal education was necessary, but rather that it is confortable for employers, given a surplus of applicants, to select on the basis of degree of education rather than other objective factors. This is no proof of better qualifications for the job, and it is obviously discriminatory against the candidate who has not had the good fortune to remain in the school system longer than his competitors.

If resources were available for meeting the immediate needs of the masses (whose participation in educational programs designed to improve agricultural production, improve health standards and in other activities, is essential to achieve national goals and higher standards of living), *and* for continued rapid expansion of the formal education system, both objectives presumably would be included in current national plans. But in most developing countries choices have to be made, and sufficient resources do not exist to provide increasingly expensive formal education systems which are in fact not functional for the great majority of the population.

Social Demand for Education

It may be argued that this is all very well in theory, but government is up against the political fact of the "social demand" for formal schooling, and that it is not a question of what is logical, but of what is politically possible. Although the social demand for schooling is a political fact, there is a real question whether this demand has as deep roots as political leaders often assume. The social demand for formal education may turn out in fact to be an uninformed one, based on the belief (true) that it is something provided relatively free of charge by the state, and the belief (false) that it assures improvement in the standard of living for those who partake of it. As stated above, there is no way whereby education by itself can provide jobs or improved standards of living if other necessary conditions are not present. No doubt the myth will die, as more and more people perceive the truth that formal education by itself may not achieve satisfactory results in practical terms for the great majority. Educational leadership has a responsibility, it would appear, for helping put this myth to rest. People

generally, it may be assumed, do not regard education as an end in itself, but as a means to other ends—the satisfaction of fundamental economic and social needs. They would, therefore, be expected to respond to programs which place education in the context of development programs which relate *directly* to the satisfaction of those purposes.

One problem is that many planning officers and decision makers, who are likely to be located at headquarters offices far removed from the people whose presumed desires are being measured, may not actually know what the priorities of the average citizen are and how they may be related to national goals and priorities. Communications are usually not very good, and there is very little if any effort made to find out what the true priorities are at the point of application of programs in the minds of the ultimate producers and consumers of wealth. Something could be learned about these priorities, for example, through attitude surveys in selected communities. Little of this kind of research has been done, however. The results might conceivably show that the social demand for formal education does not occupy as high a priority in the minds of the people as is generally supposed, *if they were offered alternative benefits* and services such as roads, irrigation facilities, better health services, employment in public works or other services provided at public expense. However, a contrary showing that people give a higher priority to the desire for schools than for, say, benefits and services as indicated above would not necessarily be conclusive, as it might reflect persisting misconceptions about what schools can or cannot accomplish. The research should therefore be designed to determine not only what is the gross social demand for schools but what specific benefits of schooling this desire is in fact seeking to obtain. If, as seems likely, the results showed that what the parents desired was opportunity for their children to escape from a life of poverty, this, and not a desire for more schools, would be the true social demand.

Reforms in Formal Education

While making the case for establishing a heavier burden of proof against continuing expansion of formal school systems, we do not imply any sense of despair concerning the role of formal education, in which much has already been invested, and much will be invested in the future. Much experimentation is currently underway around the world with the object of overcoming the weaknesses of formal systems.

Reforms in formal education directed toward making it more relevant to social and economic needs ought to be given a high priority in national plans. Innovations such as those which are related to more effective uses of teachers in adult education activities, relating the curriculum more closely to critical national problems, to a greater use of school facilities for

community activities, etc., which are being introduced in various countries ought to be studied and adopted where appropriate. In short, we do not believe that we can serve the developing countries by distracting their attention from the problems, the needs, and the potentialities of their formal school systems. There is much room for improvement of the formal school system which must be positively encouraged.

There are some reasons for believing that exposure to programs and methods in non-formal education could have a healthy effect on the formal education system. Like some other institutions, it tends to suffer from its monopoly position in the eyes of the public and the government, who are inclined to view schooling as constituting the sum and substance of education. Monopolies or near monopolies tend to become excessively ingrown and to lose sight of the purposes for which they were created. This is precisely one of the main criticisms being heard concerning formal education in most countries—that the matters being taught, not to mention what is learned which may be quite different, are far removed from the knowledge, skills and attitudes that the learner will need to use in real life. Preaching about these deficiencies is usually ineffective *in the absence of serious alternatives*. Offering meaningful alternatives might be expected to help persuade formal education to re-examine itself, and to strengthen itself in the directions that it can be most effective. Also the most productive results will often be found where formal and non-formal systems are operating in some kind of collaboration. This is particularly clear when some of the most successful job training programs are examined, where we sometimes find a close working relationship between employers and secondary schools and a free movement back and forth between job and schools. But integration of efforts between schools and out-of-school education has no less potentiality, though to date it has generally not developed in other areas. Rural development programs rely in part on simply expressed written materials—in agriculture, health, and other fields. These materials, where available, are in many instances no doubt at least as appropriate, and often more so, than the traditional school materials. Furthermore, the subject matter being meaningful to the parents (as well as the children), a mutual reinforcing of learning can take place by use of some of the same materials by parents and children. Conversely, it is possible to imagine that the objectives of the development program, which are designed primarily to impart immediately useful knowledge, could be broadened by adopting some of the learning targets of formal education. It should also be possible, for example, to beam into the schoolroom educational and informational radio and TV programs supporting development programs.

An excellent example of what has been done in relating a non-formal education program to formal education is found in the comprehensive rural development program at Comilla, Bangladesh (formerly East Pakistan).[13] In the Comilla pilot program, the headmasters of primary schools were persuaded to participate in periodic sessions at the Academy for Rural Development on the subject of relating the schools to the everyday needs of students. These colloquies resulted, after some preliminary skepticism on the part of the headmasters, in a series of innovative school programs: farm- or home-related projects, cooperative school stores, small rural museums, preparation of booklets on agriculture, health, sanitation, and other subjects related to the lives of the students, and preparation of a booklet on the "Modern Village Teacher," describing how the teacher can assist in the development of the students as citizens of the rural community. Unfortunately, these highly significant innovations were never fully appreciated by the Provincial Department of Education, and they were not widely replicated. However, this should not detract from their value as models for those who may be seeking to bring the school, along with other local institutions, more fully into the orbit of development.

The Problem of Accreditation

A dominant feature of the monolithic educational system which now prevails is that qualifications for any type of employment or promotion in any type of institution are largely determined by years of formal schooling and possession of the diplomas and degrees which attest to completion of such schooling. This fact results in an inordinate pressure on the formal system as the accreditor of worth in the society. It distracts attention from the more basic function of the school as an educational institution, which should be primarily concerned with providing useful knowledge, skills, and attitudes. It is these results and not the number of units of schooling which should be measured. Perhaps more seriously, setting up years of formal schooling as the measuring rod of worth means that knowledge, skills and aptitudes acquired outside the formal school system do not count, or at best are discounted, in the evaluation of worth.

An important task of government in establishing a comprehensive educational program might well be to devise an alternative method for evaluating educational progress. This is especially important in developing countries, where the percentage of the population which moves beyond elementary education—and in some countries which even completes elementary education—is very small.

The technology of testing for knowledge, skills and aptitudes, though not perfect, is sufficiently well advanced so that school tests do not have to be used as the sole measure of accomplishment. Testing for specific

skills is practiced in a number of developing countries. Educators in English-speaking countries, for example, will probably be familiar with the testing and certification activities of the City and Guild Institute of London. The need is for tests that measure progress in mental and skills development that can equate *in-school* and *out-of-school* learning; in other words, to neutralize the source, method or condition in which something was learned and to focus entirely on the learning itself. Very little experience with such tests is to be found in developing countries, but the technology is sufficiently advanced so that adaptations could be undertaken. The General Education Development Tests in the U. S., for example, have been in use for many years to measure achievement in reading, mathematics, and understanding of concepts. Under recent pressures on employers by the U. S. government for equality of opportunity, moreover, further refinements in the validity of such tests may be expected.

Research and experimentation in this area in the developing countries would appear to be of the highest priority if the "haves" and the "have-nots" of schooling are to have some measure of equality of opportunity for social and economic advancement. The report of the International Commission on the Development of Education (popularly known as the Faure Report)[14] speaks of the need to "dismantle the diploma-employment mechanism" and predicts that "appointments to jobs will depend increasingly on a concrete evaluation of the candidate's aptitude for a particular function rather than on perusal of his school certificates or university degree."

In order to achieve this objective, the neat progression from grade to grade, year to year, would have to be supplanted by a much more flexible life-long educational system, wherein formal school courses or non-formal programs (which may not be highly structured but none the less educational) can be undertaken at times relevant to the stage of work experience, interests and needs of the individual. This kind of "recurrent education," as it is referred to in the Commission report mentioned above, "may resolve the contradiction between institutionalized and non-institutionalized education by integrating them into a coherent system in which they . . . complement each other."[15]

The Role of Universities

Universities in developing countries are frequently charged, often justly, with maintaining a haughty and aloof attitude toward national development efforts as established by government. This attitude reflects a continuation into the period of national independence of a philosophy of higher education which has its roots in the scholastic and elitist traditions

of western society of an earlier period. Yet the universities occupy a crucial position in any effort to broaden educational objectives and to introduce a more comprehensive educational system.

The universities provide the principal, perhaps the only, basic professional training in the critical specialized fields upon which progress in agriculture, health, social welfare, law, the administrative sciences, etc., depends. If professionals in these fields are to perform their potential functions as educators of the mass of citizens, they ought to acquire the necessary motivations and skills in education and communication as part of their basic professional training in the university.

As capstones of the formal education system, the universities exercise a powerful influence upon the objectives, content, and method of that system. They tend to determine what knowledge is important and in what form knowledge is to be imparted. They tend to have a monopoly of scholarly personnel, the time available, and the academic freedom to conduct research directed toward the advancement of knowledge pertinent to development objectives. They usually enjoy substantial prestige and have an influential call upon public resources.

In view of all these elements of strength, it is unfortunate, bordering on a calamity in some cases, that the universities are often found to be isolated from the mainstream of social problems and social needs. No doubt student radicalism is often a reflection on the part of the younger generation of frustration with this contradiction.

The question is how to reconcile academic freedom of the universities with influencing them toward a more serious concern with practical development needs as defined in national policies and plans. Though this may be difficult, it does not appear that in most societies it should be impossible. The following thoughts may be worthy of consideration.

The presidents (or vice-chancellors) of universities could be invited to serve as members of the Education Review Commissions previously suggested. Out of such discussions of basic policy ought to come a first step toward a meeting of the minds as to educational objectives, to which the universities would become committed in principle. The universities could be encouraged, through offers of research grants, to undertake research on key developmental-educational problems of the type identified at various places in this monograph. Involvement in such research, it might be expected, would lead gradually into introduction of new concepts into university curricula.

We do not underestimate the gap, sometimes amounting to a chasm, between the universities and government in some countries. We do believe, however, that this gap has to be closed, if national objectives of human

resource development are to be achieved—however long a process this may turn out to be. In some instances this may require creation of totally new-style universities, if existing institutions cannot adapt themselves to the development needs of present and future generations.[16]

Training of Change Agents

Government development programs in agriculture, health, public works, community development, etc., though planned and directed by central ministries, become educational programs at the point where field extension agents come into contact with the individual farmer or urban dweller, many of whom, as previously indicated, are illiterate. In theory, and to varying extent in practice, they reach a very large percentage of the population and represent at least potentially one of the most significant of the various educational programs in the nation.

A program of agricultural improvement, for example, may be said to consist of three principal elements: an improved technology, the materials and equipment which the new technology requires and the communication of the technology to those who are to apply it. Our concern here is with the third—the planned and directed learning process, although obviously these elements are interdependent; each is relatively valueless without the other two. As in all educational efforts, knowledge is to be conveyed from those who have it to those who do not, but unless this also results in perceptibly changed behavior, its purpose is not accomplished. The question of how information can be conveyed and behavior can be influenced, therefore, becomes of central importance. The development officer, as change agent, must therefore understand the complex existing behavior patterns with which he is dealing, and what kind of motivation will lead to acceptance of the recommended behavior.

The kinds of questions to be asked by policy makers about the *educational component of development programs* might therefore begin with questions about the adequacy of their experts in the field with respect to the art of communication intended to affect behavior. Related to this factor are questions about the capability of such experts to utilize the wisdom of local leaders in designing educational programs and in extending them to a wider clientele of participants than can be reached directly by the agents. The educational profession may not be particularly helpful in this regard, but communication specialists, sociologists, anthropologists, and psychologists have some insights to contribute, and it might be well to place a high priority on seeing that such specialists are involved in pre- and in-service training programs for extension personnel who come in direct contact with the public to be educated.

Coordination of Educational Efforts

It is also essential that the total educational effort in a community be effectively integrated. Conflicting, or merely uncoordinated, messages from different government sources can easily undermine the efforts of each, only serving to reinforce the traditional skepticism of the average citizen concerning anything emanating from government. Thus the mass media reach substantially the same targets as do the development programs through their extension agents. To what extent do these media support the message of the extension agents? To what extent is each merely ignoring the other?

The same questions can be asked about the schools. The chances are that the school curriculum will be paying little attention to what the development programs are trying to do. But why? The schools are being widely criticized for the irrelevance of their programs, while presumably relevant educational materials are being developed for adults. Improved communications between these two could be of major benefit to both.

Coordination of educational efforts at the community level, it should be emphasized, depends upon the decentralization of planning and decision-making, as is discussed below. The needs and the possibilities can be perceived in the community, but if all plans are made and decisions are taken in capital cities far removed from the community, nothing will come of such perceptions.

The Role of the Mass Media

Mass communications, i.e., radio, newspapers, and television, rank very high in potential for public education, whether in the school or outside, since they have the capacity for reaching citizens of all ages and, directly or indirectly, all stages of literacy. The media, if properly directed toward educational objectives, can make indispensable contributions in two broad areas: first, in helping to create a *climate* for development by disseminating ideas and information which widen the horizons of the "uneducated" masses, raising their aspirations, and focusing attention on development programs and policies; and second by reinforcing specific development programs with informational material and discussion programs through coordination of efforts with change agents in the field.

The most important policy question is the fundamental issue of recognizing the educational potential of the media. If this potential is to be effectively exploited, it is necessary to distinguish between the use of mass communications for educational, and for political or propaganda purposes. Since in developing countries the media are likely to be operated by or under the control of government, the temptation is great to present material to the public in such a way as to make the government look good, subordinating the educational objective to the political one. Where this is done, not only is the educational potential of the media frustrated,

but the political objective itself is not advanced in the long run, since distortion of information underestimates the intelligence of the masses and reinforces their traditional distrust of government. Both development and political stability would be greatly advanced under a policy of truth-telling from governmental sources. Such a policy would be easier to apply, and the results would be better, under a parallel policy of decentralization of the media, since information originating nearer the point of reception is more likely to be accurate with respect to local realities, as well as of considerably more interest.

The problem of objectivity in the diffusion of information and ideas is similar in some respects to that of obtaining objectivity in employment in the public service against the pressures of favoritism, nepotism, regionalism, and politics. The solution (never completely successful, not surprisingly) to this problem has usually been to create independent commissions to oversee the application of merit in public service employment, promotions, and other aspects of personnel administration.

It may be that such a device would be necessary in the operation of the mass media, where the pressures to ignore educational objectives are no less strong and no less damaging in their effects. Such a commission would have a membership of distinguished citizens not committed to any one party, or alternatively balanced among major parties. Its essential purpose would be to represent the public interest in a genuinely educational approach to dissemination of material by government controlled media; but its functions might also include evaluation and recommendations concerning the comprehensiveness of coverage and impact of the media.

Mass communications as educational instruments will be effective to the extent that communication is recognized as a two-way affair, in which provision is made for the flow of questions and of dissenting opinions back to the source. It is, of course, much easier to *tell* people than to communicate with them, but the originators of the message have no means of knowing what has actually been told unless they find out what has been *heard*, and also what has been *done*. The laborious business of devising systems of feedback is therefore a necessary part of a mass communication program. Having such feedback will also help in keeping the media on the path of truth. Local leaders, as well as program officers in the various developmental programs, can play a major role in this, but systematic audience research by trained communications specialists would also be valuable.

Occupational Training in the Private Sector

The efforts of formal education systems to prepare their graduates for employment in the modern sector of industry have generally not been crowned with success. It has been found very difficult for schools to keep

up with changes in technology and specific job requirements of a wide and constantly changing panorama of specific jobs; nor can they create the social and psychological climate of the working environment.

Faced with the shortcomings in formal occupational education, employers have found it necessary to do their own job training for industrial-type employment, or to arrange for it to be done through programs set up by associations of employers, sometimes with the assistance of governments, or by governments directly, in institutions outside the formal educational system but in close association with employers. All of these represent variants of non-formal educational programs. Staley, in his comprehensive study of *Occupational Training in Developed and Developing Countries*, states that the task of the schools with respect to occupational training "is to produce readily trainable people" and that the employers, or agencies set up with their cooperation, should carry the task of specific job training.[17] The question of what constitutes "readily trainable people" in this context, however, has not been systematically studied, and the tendency is probably to assume that more formal education is required than can be proved necessary. The private sector tends to take the products of formal education as it finds them, and invests whatever is necessary in job training to produce an effective work force. Perhaps because of an assumed rigidity in formal education, not much effort is made to devise a fit between the schools and the basic preparation on which job training is built. This would require systematic analysis of the fundamental skills and aptitudes prerequisite to successful industrial employment. It may be assumed that employment officers, as a matter of convenience in the selection process, tend to establish qualification requirements in terms of formal schooling that are higher than is warranted—a process which both discriminates against the majority who have not survived the rigors of formal education and at the same time contributes to the social demand to continually expand the school system.

The national systems of occupational training such as have been created in a number of countries, notably in Latin America, are of special interest to the student of non-formal education.[18] Such systems are semi-autonomous, are completely outside the formal school system, and probably represent the highest development to date of what may be called a non-formal educational "system." They perform the dual role of offering job training in their own job training centers, and of stimulating and assisting employers, both private and public, in the development of within-plant training programs themselves. Such assistance is usually in the form of technical assistance and of financial support through funds collected from payroll taxes upon employers.

The Military

Military establishments, in the process of developing the skills required in a modern army, provide training in a wide variety of skills that are useful in the modernized sector of the economy, as well as in rural areas. In addition, they may offer special training programs prior to demobilization. Altogether, in a state which has universal military training, or something approximating that, it is obvious that a high percentage of the young men, and some young women, pass through an educational program in the military service which may in some respects be at least as important for them—perhaps more so—as their formal schooling.

The question is, what efforts are made to relate this education to employment needs and opportunities? In considering the relationships between formal education and industry, the kind of coordinating body suggested above might be appropriate for this purpose, either as a separate bi-partite agency, or even better as a tri-partite agency including the military. In fact, success of developing states in making an effective military organization from relatively raw human material is certainly one of the more impressive educational achievements of many developing countries. The methods by which this is done—making allowance for the disciplined character of military service—deserve more study than they are usually given by national policy makers concerned with the problems of improving the efficiency of their educational systems.

Voluntary Agencies

A wide range of voluntary agencies, whose primary functions are outside the field of formal education, are involved in non-formal educational activities. The Ethiopian Sectoral Review, referred to above, identified the following types of agencies as conducting educational programs in that country: churches, foreign missionary groups, labor unions, YMCA and YWCA, the Women's Welfare Association, a private agricultural corporation, school clubs, Boy and Girl Scouts, and the Youth Service fostered by the university. This is no doubt illustrative of what would be found in many countries. Furthermore, many of these organizations have been attempting to achieve their program objectives through non-formal educational methods, long before the term came into usage and long before some governments have fostered development programs using similar methods.

Research

Answers to many of the questions posed in preceding pages will depend on research within the developing countries which is still in embryonic form, if it exists at all. Some of the institutional resources to conduct such research will be found in a few pilot projects and a few university institutes focused

on special areas such as rural development, and possibly in a few ministries of government. However, in launching a novel and complex research undertaking, as is implied here, consideration might well be given to creation of some single agency to provide leadership and coordination, such as a *Research Institute for Education and Development*.[19] The functions of such an institute would be: (1) to provide intellectual leadership and coordination in the subject area; (2) to propose research grants in the area, and to act upon, in behalf of government, research proposals initiated by universities or other sources, and (3) to maintain professional liaison with international agencies, other national agencies, and foreign universities conducting research or operational programs in the broad area of education and development. Such an institute might well be staffed to do some of its own research, but with the almost certain shortage of professionally trained personnel in the social sciences, first consideration should probably be given to strengthening the resources of existing institutions, especially present or newly created institutes of universities, rather than duplicating those resources. Efforts to encourage research at local and regional centers dealing with local problems as they arise in real-life situations would be especially productive.

Such a research institute might be set up as a government agency. However, as it would doubtless be critical of the existing educational system or systems, it would probably be more effective if it had an autonomous status with responsibilities to make recommendations to government, but not subject to ministerial control.

Costing Non-Formal Education

Despite all that has been said in the preceding pages, the case for expanding the use of non-formal education programs cannot be based on an hypothesis that the overall costs of education can be decreased through any magic formula. Although economists have lately been giving increased attention to comparative cost-benefit studies of formal and non-formal education programs, no conclusive findings have so far been forthcoming. In his study of economics and non-formal education (1974) Hunter examines some efforts to compare relative costs of formal and non-formal education but concludes that much more research is needed before such analysis will be at all convincing.

> There is an increasing awareness among economists of the role of non-formal education in human resource development. But only a part of the investment in non-formal education, i.e., on-the-job training, is explored at all, and even there the surface has hardly been scratched. Investment in in-service training or follow-up training where non-formal education can be a complement for formal education has yet to be

> explored . . . there is little empirical information on the rate of return to non-formal education.[20]

For the present, the case for greater attention to non-formal education must rest on the merits of making *maximum use of existing resources*, and of integrating the various elements of the educational process into a planned and coordinated national effort.

Non-Formal Education of Government Employees

Government itself is likely to be the largest single employer in developing as well as in developed countries. In fact, in developing countries government employment of all types (not including the military) may represent half or more of total employment in the modernized sector. Governments have generally failed to recognize that as well as administering formal school systems, they also administer large departments, authorities, etc., which are, in addition to their more obvious functions, institutions for the education of their employees. Here we face the fact that the quality of the public service in most developing countries is not such as to provide the kind of working environment which encourages growth of the workers, nor is it likely to become so without major administrative reforms, particularly in the areas of personnel management and other management methods and procedures. A typical government bureaucracy, therefore, is likely to be an institution in which large numbers of persons with potential probably well above the average are being subjected to what may be described as a negative educational environment—where, rather than growing, they are being rather systematically stunted.

It is not maintained that this observation applies to all governments, or to all parts of any one government; however, it is the almost universal observation of students of development that development programs falter or fail usually through failures in administrative policies and practices, and particularly that the human side of public service is sadly neglected and often deplorable. In short, governments which declare an interest in the development of their human resources might do well to start by first examining the educational job they are doing with respect to the many thousands over whom they have a direct control and a direct responsibility. This ought to be done in any case in the interests of a more efficient service to their citizens, and a more efficient public service would have far-reaching effects for good beyond the welfare of the public servants themselves. To no small extent, the public service sets the tone for the society.

In many developing countries a greatly strengthened concern with the upgrading of the knowledge and skills of public employees is much needed, especially since recruitment procedures for the public service usually

emphasize formal educational achievement with insufficient attention to specific job requirements. However, training by itself will accomplish little, if anything, unless the work processes themselves are rationalized. The two, training and work improvement, constitute the twin parts of programs for public service reform, and would be one of the most important steps that government could undertake in the entire area of human resource development.

Improvements in public administration of the kind needed in many developing countries are, of course, major undertakings. A model is the recent analysis of the entire public service of Nigeria (1973-4), which resulted in the adoption by government of recommendations for modernization of administrative policies and methods, and greatly expanded training programs throughout the public service.[21] Such reforms involve extensive retraining of top administrators through "staff-college" types of institutions outside the formal education system, relying heavily on non-formal methods, notably on supervised colloquies with mature colleagues from both the public and private sectors, under guidance of foreign or domestic experts in administration. In-service training at all other levels is also required.

Decentralization of Administration

Our questions concerning the educational potential of local institutions are based on certain convictions about the importance of local institutions in human resource development:

1. That learning takes place outside formal school systems most naturally and effectively where citizens have ready access to sources of new ideas and information and where the system of governmental administration encourages the exercise of genuine responsibility in putting such knowledge to use in matters which affect their daily lives.
2. That central government should actively concern itself with the creation and continued strengthening of local institutions through which such responsibilities can be exercised.
3. That as a general rule, governments, while sometimes meeting this idea in principle, are usually unsuccessful in putting the principle into practice.
4. That even though it might be possible to develop informed and responsible citizens in a vacuum of real life responsibility, which we seriously doubt, such an achievement would be futile if the opportunities for responsible action were denied through traditionally excessive centralization of governmental planning and decision making.
5. Coordination of programs at the local level is crucial if local responsibility is to be meaningful.

It is at the local community level that we find the problems as *seen by the local community*, and not as specialized sectors of administration, or projects sponsored by this ministry or that aid-giving agency. It is here that, in an agricultural community for example, education is partly agriculture, and agriculture is partly education. What the farmer wants is help in analyzing his problems, and in working out solutions, and he is not interested in what identifying uniform the person wears who provides the assistance.

In short, development programs will never succeed until all the available resources can be brought to the ultimate consumer in an integrated way. Many development programs go part way in this direction, but few are genuinely intersectoral. Certainly the integration of education with the total development process has rarely been carried through to its logical conclusions.

It is not possible, however, to decentralize administration of national programs all the way to the local community; there are too many local communities, and they are not large enough to justify professional staffing at that level. Consideration therefore needs to be given to creating, or strengthening if they already exist, the intermediate level of organization between provincial headquarters and the local community. Such regional organizations would be designed as bridges between national policy and resources on the one hand and community problems and needs on the other. They would be the type of institution, that is, which has ready access to the central and/or provincial government and the community, but with a strong bias toward looking at problems through the eyes of the community. With specific reference to education, they would be concerned with enriching the content and improving the educational technology of agricultural, health and other development programs, and also with enriching the content and improving the technology of school programs—all incidental, however, to the primary concern of problem definition and problem solving.

Illustrations of such regionalization may be found in both the developed and the developing countries, but successful models are not numerous. Significant illustrations of efforts on the part of developing countries to bridge the gap between national policy agencies and the point of application in the local community may, however, be cited from Bangladesh (East Pakistan at the time of the origin of the programs in question), Tanzania, Kenya and Peru. In Bangladesh, for example, a model for decentralization had been developed in the comprehensive rural development program at Comilla, previously referred to, where the thana, with a population of somewhat over four million, constitutes the region or dis-

trict. This experiment has demonstrated in a great variety of ways the workings of non-formal educational institutions, but the point to be emphasized here is that regional institutions were created, with the intellectual leadership in the newly created Thana Training and Development Center, as the focus of planning, coordination and training. All existing, as well as newly created local institutions, look to the leadership of the Center, and the political arm, the Thana Council, for integrated community development at both the thana and the village level.

Somewhat similar in theory are the recently created District Development Centers, set up on an experimental basis by the government of Kenya. These centers are, however, primarily concerned with training and do not have other substantive development responsibilities. Such centers (also found in some other countries) may be able to facilitate educational with other development objectives, but appear to lack the flexibility of the Comilla-type centers.

Administration in Tanzania has been decentralized to eighteen regions.[22] To reinforce the government's intention to decentralize, the national budget has been divided into two major portions, 40 percent of which is allocated directly to the regions. In the judgment of the government, this scheme of decentralization is contributing significantly to President Nyerere's program of "self-reliance."

In Peru, the regional organization is the zone, which is staffed to provide trained personnel ("animators") with a major orientation toward problems as seen by the local community.

The point being emphasized has been well expressed by E. L. Schumacher:

> A given political unit is not necessarily of the right size for economic development to benefit those whose need is the greatest. In some cases it may be too small, but in the generality of cases today it is too large . . . If the purpose of development is to bring to those who need it most, each 'region' or 'district' within the country needs its own development . . . A few thousand people no doubt would be too few to constitute a 'district' for economic development; but a few hundred thousand people, even if fairly widely scattered, may well deserve to be treated as such. Each district, ideally speaking, would have some sort of inner cohesion and identity and possess at least one town to serve as a district centre. . . . while every village would have a primary school, there would be a few small towns with secondary schools, and the district centre would be big enough to carry one institution of higher learning. The bigger the country, the greater is the need for internal 'structure' and for a decentralized approach to development. If this need is neglected, there is no hope for the poor.[23]

Organization for Educational Programs Under a Comprehensive Educational Policy

Major organizational changes would be necessary for implementing a new national education policy along the lines discussed in this monograph. A major organizational objective would be to focus responsibility at some point high in the government hierarchy for continuing concern with the whole national educational effort. This is a planning, coordinating, advisory and evaluating function—not an administrative responsibility for everything educational, which would be totally impossible under the broader concept of education here discussed. The most likely solution would probably be to broaden the responsibilities of the Ministry of Education to include, functionally but not administratively, both formal and non-formal education. This same broadened responsibility would apply at subordinate levels of administration. Under this conception the Ministry of Education would be seen as performing two major and different functions: (1) a professional staff service to both public and private programs or operations having present or potential educational functions, and (2) operation of the formal education system. This assignment of responsibility to the Ministry of Education would obviously be dependent upon a clear understanding with the head of state that the Ministry of Education fully understands and is prepared to accept responsibility not previously envisioned in that ministry.

An expansion and revision of the responsibilities of the Ministry of Education would require considerable reorientation and retraining of the Ministry staff to accommodate the new responsibilities, especially as they would include the more novel non-formal dimension. It must be emphasized that the reference here is to research and staff advisory functions. As stated earlier, one of the strengths of non-formal education methods is that the education is intrinsically a part of the method of operation. Therefore, central *control* of non-formal education is not what is wanted, as this would undermine one of its principal strengths.

Also to be avoided is any reorganization of the Ministry of Education to accommodate the broader purposes outlined above, which would involve drawing a clear-cut organizational line between formal and non-formal education, with all of the jurisdictional disputes which this would imply as to what is formal and what is non-formal. The assumption should be that both formal and non-formal education take place throughout the society, and that the Ministry of Eudcation has concern with, but *not jurisdiction over*, the national program of education.

Nevertheless, there must be at the top staff level some personnel and some organizational unit that specifically concentrate their attention on the non-formal aspects of education as specialists in this field. This staff will

need to work in collaboration with personnel from all types of private and public organizations which use non-formal education to accomplish their program goals. The function of such a unit would be: (1) to make studies of non-formal education experience in the country (and in other countries); (2) to conduct conferences and workshops on non-formal education which would deal with problems of communication, motivation, evaluation and related problems which reflect the characteristics of non-formal education as indicated in Part I of this monograph; (3) to maintain a library of books, case studies and other materials (some of which are referred to in this monograph) which can be used as references and instructional materials; and (4) to serve as resource persons to educators involved in both formal and non-formal programs. Persons who serve in this staff capacity must be persons of better than average creativity and flexibility, with concern for *learning* in novel ways and under more varied conditions than is characteristic of the formal schools. Some opportunity should be provided for the special training which such a staff would need—some of which may be provided by non-degree study of successful programs in other countries.

Furthermore, the danger of over-systematizing non-formal education must be avoided. One of the great virtues of this form of education is its flexibility. Another is its *subordination of process to purpose*: education is regarded as one of the means by which a job is to be accomplished, or a program carried out, and not an end in itself. The content and methods of education accordingly are adapted quickly to changes in product, program or technology. A national policy or a national plan must assure that these values are not destroyed. Centralization of policy formulation, which is essential, should not be permitted to lead to centralization of administration. A deliberate policy of continuing decentralization and encouragement of experimentation and flexibility is therefore essential from the start. Such a policy is hard for government to adopt, and even harder to administer, but it is crucial.

An alternative would be to establish a special interministerial committee or staff responsible to the Prime Minister or equivalent top administrative officer, leaving the Ministry of Education with responsibility administratively for only the formal system. The function, capabilities and working relationship of such a staff would not differ fundamentally from those indicated above. Furthermore, additional organizational and administrative difficulties could be anticipated. On balance the alternative of broadening the outlook and professional capabilities of the Ministry of Education appears to be the more pragmatic alternative to solve the problem of integrating formal and non-formal education in a national policy and program of education for all the people of a nation.

All the questions, comments and suggestions indicated in the foregoing are submitted by the authors with a deep realization that there are no easy solutions to the problem of formulating and implementing a national policy of education. No country has devised a wholly satisfactory policy and program addressed to the varied needs and potentialities of a society which wants to encourage and utilize the full potential of its human resources for the realization of national goals and the enrichment of the lives of the people. There are no models of complete success in such an endeavor—only bits and pieces of experience, but the stakes are high and some progress toward the goal would be worth every effort to approximate the goal.

IV
Summary

This monograph has attempted to provide background information, questions and comments about current trends in development theory and practice and their impact on education, as framework for consideration by policy makers, planners and administrators in developing countries and in aid-giving agencies who are concerned with policies and programs to maximize human resource development. In view of the extremely wide range of resources and problems in the developing world, the propositions were necessarily stated in general terms and may be expected to have varying degrees of relevance in different nations. Because of the nature of the readership that we have sought to reach, we have aimed at brevity rather than depth in the exposition of ideas. For those who wish to explore the subjects discussed in greater depth, we present some bibliographic aids in Appendix B.

The major points developed in the monograph may be summarized as follows:

1. Development theory and practice which, in retrospect, placed undue emphasis on industrialization and increase of the GNP without sufficient regard for the distribution of the benefits of increased economic activity, is now being seriously reappraised.
2. Likewise in the rural area, policies and activities which are capsulized in the term "Green Revolution," although successful to a degree in increasing agricultural production by large farmers, bypassed myriads of small farmers whose production potential and general welfare is now being given greater importance.
3. The realization of national goals, economically, socially and politically, is now perceived as requiring the participation of the previously bypassed masses of urban and rural citizens, literate and illiterate. Top priority will need to be given to educational programs which will reach the masses with new knowledge and skills and which in turn will foster attitudes and behavioral patterns more favorable to development, broadly construed.
4. The formal education system has generally been assumed to constitute the principal, if not the exclusive institutional instrument for education; but its expansion to represent the principal or only instrument for meeting educational needs is fiscally impossible and strategically questionable.

5. It is now beginning to be perceived that formal educational institutions in fact contribute only one segment of the total national educational effort, and that a broader concept of education, to include all institutions which contribute to the development of new attitudes, knowledge and skills, is indispensable to any plan for maximum development of human resources.
6. The major institutions, in addition to the formal educational institutions, which participate, consciously or unconsciously, in the educational process, are: government agencies in direct contact with the public, carrying out specific development, welfare and law and order functions; the central, provincial and subordinate bureaucracies which provide the working environment and the training setting for large segments of the working population; the private enterprises performing a comparable role in the private sector; the mass media; the military, and a wide range of voluntary organizations.
7. The *non-formal* education methods used by such institutions are in a number of respects better adapted to the present educational needs of the developing countries than are the formal schools. They are designed to achieve more immediate results, especially in preparation for, or improving effectiveness in, socially useful jobs; in reaching large numbers who for whatever reason are outside the formal education stream, notably adults and school drop-outs; in affecting behavior more directly; in building upon what is likely to be stronger motivation, due to its more obvious relevance to real-life problems and needs and to the presently existing knowledge and skills of the learner; in being less dependent upon literacy by using primarily oral and visual methods of communication; and in taking advantage of the strengths of group learning, especially where behavioral changes are the principal objective.
8. Governments exercise control, either directly or indirectly, over all the institutions referred to above, and can, if they will, lead and direct their efforts toward participating in a national program of comprehensive human resource development.
9. Effectiveness of such a program would have to be based upon a national policy of human resource development adopted at the highest level of government.
10. Sector reviews of all educational activities are advocated as a means of formulating an integrated national policy of education.
11. For effective implementation, an integrated national policy and program of education would require organizational changes within government which would assure: (a) coordination of the total educational

effort to achieve mutual reinforcement rather than mutual neutralization, and (b) specialized attention to the existing resources and potential for non-formal education.

12. Creation, encouragement, and support of regional and local institutions having substantial responsibilities in planning, finance, operations and elementary research are indispensable in any policy of education of the people.
13. In many developing countries, administrative reforms of the public bureaucracies, especially in the area of human relations, in addition to being needed for the implementation of development plans, are essential prerequisites in a policy of using the work environment as an instrument of national education and of demonstrating the seriousness of government's intentions with respect to such a policy.
14. The educational function of the mass media needs to be specifically defined and differentiated from their political or propaganda role, and to be maximally developed. Whatever administrative measures may be required to accomplish this difficult separation should be taken. Decentralization of media operations, whether in the public or private sector, would be helpful to accomplishment of this purpose.
15. Proposals for the continued expansion of the formal education system, like all development proposals, should be subjected to the test of specific educational and developmental objectives. Significant allocations in formal education budgets should be devoted to research and experimentation with innovations designed to increase the efficiency and effectiveness of the formal education system.
16. Research should urgently be directed at identifying methods—alternatives to formal school tests and progression up the formal school ladder— for measuring achievement in knowledge and skills through practical experience, participation in non-formal education programs, and other sources.
17. Non-formal education programs of voluntary agencies should be studied for possible in-puts into governmentally-sponsored education, both formal and non-formal.
18. The universities, allowing due respect for their legitimate demands for academic freedom, should be brought in as full partners in the development and implementation of a new education policy, particularly in the areas of research and professional training.
19. The difficulty of the task of developing and implementing a national policy of education, focused on a maximum development of human resources as the key to all national development purposes and programs, is fully appreciated by the authors, but the payoff for the effort to create such a policy is predictably constructive and valuable.

Appendix A
Notes

1. Definition of terms used in the monograph:

   Formal Education is defined as a hierarchically structured, chronologically graded educational system typically operated or monitored in developing countries by ministries of education.

   Non-Formal Education is any deliberately organized educational activity, outside of the established framework of formal school and university systems, principally for out-of-school youth and adults, for the purpose of communicating ideas, developing skills, changing attitudes or modifying behavior related to the realization of development goals and the achievement of higher standards of living and welfare of the people.

   Informal Education is a term used by some educators to refer to learning not deliberately planned or organized, but growing out of experience, parental guidance, learning from peers, observations, trial and error and related sources of learning. We have not found it necessary to use this term, which we believe expands the concept of education inordinately; we do, however, recognize the very great significance of the cultural, political and social environment in education, and the relevance of all such societal influences.

   Development refers to the economic and related social processes through which increases of goods and services are attained and distributed. Activities frequently referred to as "nation-building" and activities designed to achieve "national integration" are subsumed in this definition.

2. A full report of the Ethiopian Sector Review, its purposes and findings, may be found in R. O. Niehoff and B. D. Wilder, *Non-Formal Education in Ethiopia*, Program of Studies in Non-Formal Education, Michigan State University, East Lansing, Michigan, 1974.

3. Edgar Faure et al. *Learning to Be: The World of Education Today and Tomorrow*, UNESCO, 1972.

4. A thoughtful discussion of formal and non-formal education is authored by Marvin Grandstaff, published under the title of *Alternatives in Education: A Summary View of Research and Analysis on the Concept of Non-Formal Education*, Program of Studies in Non-Formal Education, Michigan State University, East Lansing, Michigan, 1974.

5. For an elaboration of these points, see Frederick H. Harbison, *Human Resources as the Wealth of Nations*, Oxford University Press, New York, 1973.

6. Max Milliken and David Hapgood, *No Easy Harvest: The Dilemma of Agriculture in Underdeveloped Countries*, Little Brown & Company, Boston, 1967.

7. For example, in Indonesia, which has recently adopted a progressive and ambitious program of what is there referred to as "out-of-school education," the Directorate General of Out-of-School Education is one of the seven major subdivisions of the Ministry of Education and Culture.

8. See Wilbur Schramm, *Mass Media and National Development: The Role of Information in the Developing Countries*, Stanford University Press, Stanford California, 1964.

9. For more extensive discussion of appraisal, see Ted W. Ward and William A. Herzog, Jr., et al., in *Effective Learning in Non-Formal Education*, Program of Studies in Non-Formal Education, Michigan State University, East Lansing, Michigan, 1974.

10. Overseas Liaison Paper No. 2, American Council on Education, Washington, D. C., 1973.

11. R. O. Niehoff and B. D. Wilder, *op. cit.*, p. 5.

12. For data on education expenditures of developing countries, see Edgar Faure et al., *op. cit.*

13. Arthur Raper et al., *Rural Development in Action: The Comprehensive Experiment at Comilla, East Pakistan*, Cornell University Press, Ithaca, New York, 1970.

14. Faure, *op. cit.*

15. Faure, *op. cit.*

16. For an interesting discussion of the functions which universities perform or could perform in developing countries, see Burton D. Freeman, "Needed: A National Policy toward Universities of the Underdeveloped World," in *Public Administration Review* XXVIII, No. 1, Jan. Feb., 1968.

17. Eugene F. Staley, *Planning Occupational Education and Training for Development*, Praeger Publishers, New York, 1971.

18. Michael Lukomski, *Alternatives for the Training of Skilled Industrial Labor in Sao Paulo, Brazil*, Supplementary Paper No. 1, Institute for International Studies in Education, Michigan State University, East Lansing, Michigan, 1975.

19. Peru has created such an institute. In fact, current educational developments in Peru are particularly relevant to much of the discussion in this monograph.

20. John M. Hunter, *Economics of Non-Formal Education*, Program of Studies in Non-Formal Education, Michigan State University, East Lansing, Michigan 1974, p. 151.

21. Federal Republic of Nigeria, Public Service Review Commission, *Nain Report*, Lagos, 1974.

22. Paul Bomari and Douglas Ensminger, "Tanzania's Road to Development: Bringing Development to the People," in *International Development Review*, 1974(2), p. 7.

23. E. L. Schumacher, *Small Is Beautiful: Economics as if People Mattered*, Harper and Row, New York, 1973, pp. 166-7.

Appendix B

Selected Bibliography

Annotated References

Ahmed, Manzoor, and Coombs, Philip H., eds. *Education for Rural Development: Case Studies for Planners*. New York: Praeger Publishers, 1975.

This 661-page volume is basically a useful reference book for planners and practitioners of rural development activities. The staff work which produced the volume was provided by the International Council for Educational Development (IDED) under sponsorship of the World Bank and the United Nations Children's Fund (UNICEF). The selected cases provide the empirical basis for two additional volumes, which are also annotated here.

There are seventeen case studies from fifteen developing countries organized in two sections (1) Programs for Basic General Education (literacy, mass media, youth programs, and related activities) and, (2) Programs for Employment-Related Education (agriculture, skill training, small industries and related programs).

The cases, although understandably not uniform in format, typically cover such topics as (1) general background of the country with specific background information on the program being analyzed; (2) description of the formal school system and the organizational framework and specific examples of various non-formal education programs (especially in Section I); (3) cost information; (4) problems encountered; and (5) appraisal, including "lessons learned" and "policy implications" for planners. A number of the problems cited and mistakes made (sometimes resulting in major failures) provide clues as to what to avoid in planning and administering rural development projects.

Brembeck, Cole S., and Thompson, Timothy J., eds. *New Strategies for Educational Development: The Cross-Cultural Search for Non-Formal Alternatives. Lexington, Mass.: D. C. Heath and Company, 1973.*

This is a compilation of seventeen brief essays which together constitute a succinct and highly readable perspective of changing conceptions of the relationship between education and development, and of the nature and role of non-formal alternatives (or complements) to formal education. Dr. Brembeck's introduction to the volume defines the principal problems at which new strategies are directed and provides a brief guide as to what to look for in the individual essays.

All of these essays provide relevant background, or an elaboration of points discussed in the present paper, but we particularly refer to the three essays grouped under "Non-Formal Education in Individual Change," and the essays grouped under "Issues in Planning Non-Formal Education." C. Arnold Anderson

offers some characteristically wise caveats in his essay on "Fostering and Inhibiting Factors," as does Philip H. Coombs in his essay, "How Shall We Plan Non-Formal Education?"

Coombs, Philip H., and Ahmed, Manzoor. *Attacking Rural Poverty: How Informal Education Can Help*. Johns Hopkins University Press, 1974.

This 292-page volume, in which the authors were assisted by staff members from the United Nations specialized agencies – FAO, ILO and UNESCO – was prepared by the International Council for Educational Development (ICED). The volume was commissioned and financed by the World Bank (with additional support from the Ford Foundation) for the purpose of answering two basic questions important to the World Bank, with implications for other donor agencies and governmental officials: (1) "To what extent could the Bank's financing of education be extended to non-formal educational programs, and (2) What strategy should the Bank pursue in this field and what might be the most promising and appropriate types of projects to support?" (p. 4). Background for the observations, critiques and recommendations were the twenty-five case studies and field notes of a variety of non-formal programs in fifteen developing countries, aimed at "increasing rural employment, productivity and income–in general, those programs designed to improve the knowledge and skills of farmers, rural artisans and craft workers and small entrepreneurs" (p. 4).

Thus the study, for practical reasons, did not include such important aspects of comprehensive rural development and rural welfare as literacy, family planning, local government and other programs. After general material on the background of the study and an overview of rural education, the following major topics were treated: (1) extension and training programs in agriculture; (2) training for non-farm occupations; (3) self-help approach to rural development; (4) the integrated approach to rural development; (5) a critique of agricultural education-research systems; (6) a critique of training programs for non-farm skills; (7) improving the technologies of non-farm education; (8) the economics of non-formal education; (9) planning, organization, management and staffing, and (10) a final recapitulation and commentary.

Readers of the volume will find no easy answers to policy or operational alternatives to solve problems of rural poverty. The problems are much too complex for one volume or possibly a dozen volumes. Furthermore, there are no brilliant breakthroughs or complete success stories cited which could be used as models. But pitfalls to avoid are indicated and analyses of partially successful programs are described, which policy makers and practitioners should find useful.

Faure, Edgar; Herrera, Felipe; Kaddoura, Abdul-Razzak; Lopes, Henri; Petrovsky, Arthur V.; Rahnema, Majid; and Ward, Frederick C. *Learning to Be: The World of Education Today and Tomorrow*. Paris: UNESCO, 1972.

This is the report of the International Commission on the Development of Education, whose membership consisted of seven distinguished educational statesmen from France, Chile, Syria, Congo, U.S.S.R., Iran, and the U.S. The report presents an imaginative forward-looking view of education from an international perspective. It stresses

"above all two fundamental ideas: lifelong education and the learning society. Since studies can no longer constitute a definitive 'whole,' handed

out to and received by a student before he embarks on adult life, whatever the level of his intellectual equipment and the age at which he does so, educational systems must be thought out afresh, in their entirety, as must our very conception of them. If learning involves all of one's life, in the sense of both time-span and diversity, and all of society, including its social and economic as well as its educational resources, then we must go even further than the necessary overhaul of 'educational systems' until we reach the stage of a learning society."

In the development of this theme, see especially Epilogue Part II, "A Learning Society: Today and Tomorrow."

Also of special interest for the present paper is Chapter 8, "Elements for Contemporary Strategies," which provides brief descriptions of a variety of innovations in formal and non-formal educational settings in both the developed and the developing worlds.

Trends of costs and demand for education are discussed in Chapter 2, "Progress and Dead Ends," and are presented in statistical form by world regions and countries in Appendix 7.

Major generalizations and recommendations of the Commission are presented in italics, which makes for easy identification of salient ideas.

Harbison, Frederick H. *Education Sector Planning for Development of Nation-wide Learning Systems*. OLC Paper No. 2, November, 1973. Published by the Overseas Liaison Committee of the American Council on Education, Washington, D. C.

In the brief span of fifty-four pages Harbison summarizes the basic considerations which need to be taken into account in planning a nationwide learning system. Among the key elements discussed are: (1) sponsorship of the assessment; (2) identification of goals and selection of perspectives; (3) the role of formal education in learning systems; (4) the role of non-formal education and training; (5) the need for and limitations of quantitative analysis, and (6) appraisal of learning opportunities provided by employing institutions. Harbison concludes that: "In its most advanced form the sector approach to analysis of nationwide learning services is a means of viewing all aspects of national development from the perspective of human resources. It rejects the notion that there is a self-contained compartmentalized sector called formal schooling" (p. 33).

Harbison, Frederick H. *Human Resources as the Wealth of Nations*. Oxford University Press, 1973.

This perceptive volume is a publication of a project of "The Inter-University Study of Human Resources in National Development" of Princeton University. The central thesis of the book is "that human resources–not capital–nor income–nor material resources–constitute the ultimate basis for the wealth of nations." Further, and in the same vein, "human resources approach to national development, therefore, is people-oriented, though it does not presume to encompass the full range of human ambitions or endeavors" (p.3). Highly useful analysis and discussion is found in the chapters on: (1) perspectives on progress; (2) the underutilization of human resources; (3) critical issues in formal education; (4) non-formal education and training, and (5) national development from the human resource perspective.

In conclusion, Harbison states that the human resources approach emphasizes the "generation of better employment opportunities for *all* segments in the labor force—it is centrally concerned with *who* shares in productive activity as well as with *what* and *how* much is produced. It would give priority to removing disparities between the rich and the poor and between the highly educated and the less educated. . . Formal schooling is a fundamental part of the process, but working environments themselves and a wide range of non-formal training activities play strategic roles as well. In today's developing countries, the human resources approach would stress unusual learning opportunities for adults and children alike. It would seek to build formal education and other relevant learning activities into a comprehensive and cohesive nation-wide learning system geared closely to present and future opportunities for productive work. According to this logic, universal learning opportunity is a goal of higher priority than universal primary education for children of school age, although both are important for effective nation-building" (pp. 158-159).

Paulston, Rolland G. *Non-Formal Education: An Annotated International Bibliography*. New York: Praeger Pbl., 1972.

In response to a growing interest in non-formal education, Professor Paulston has made a significant contribution to planning by annotating almost 900 references to various aspects of the subject. The volume is particularly useful to persons in planning, education and other nation-building ministries in developing countries, who wish to expose themselves to a wide range of research findings and thoughtful commentaries as background for understanding and incorporating non-formal education in the formulation of policies and programs for their respective countries. It is because we have advocated that thoughtful planning be done by an interministerial (interdisciplinary) group in countries which wish seriously to consider reformulation of their educational policies to include both formal and non-formal education that reference to this volume is particularly relevant. Some 30 of Paulston's 900-odd references (not including those referred to in footnotes or in these annotations) are listed under Other Bibliographic References, *infra*. Preferences in the selection have been given to the following: (1) case studies in developing countries; (2) recency of reference—none before 1968; (3) spread of developing countries; (4) those which emphasized planning; (5) range of programs including literacy, agriculture, community development, trades training, family planning and related developmental subjects, and (6) likely availability. In brief, we recommend a general examination of the Paulston volume and the specific selected annotations. A working group in any developing country can doubtless secure help in getting the recommended or other references from the World Bank, AID, British Council, or Ford and other foundation offices, or by direct acquisition.

Raper, Arthur; Case, Harry L.; Niehoff, Richard O.; Ross, William T.; and Schuler, Edgar. *Rural Development in Action: The Comprehensive Experiment at Comilla, East Pakistan*. Ithaca, New York: Cornell University Press, 1970.

Possibly more than any other document in print, *Rural Development in Action* provides a book-length case study of the role of non-formal education

(without using the term) in comprehensive rural development, or what is now more popularly called "integrated rural development." Although experiments in modifying or supplementing formal school programs (experiments in introducing a rural bias in the curriculum, school public works, the use of religious leaders as instructors in feeder schools, etc.) are described, the bulk of the book is devoted to technical aspects of rural development and the role of cooperatives and governmental services in the process. Interspersed in the accounts of how agricultural production was increased, agricultural machinery introduced (irrigation systems, cold storage plants), and rural infrastructure (roads and water channels) improved, are descriptions of how: (1) communication devices with illiterate adults - men and women, were used; (2) village leaders, model farmers and organizers were involved as intermediate "change agents"; (3) government development officers (agriculture, health, etc.) were used as "teachers"; and other topics which link non-formal education as a method of communication, persuasion and skill and knowledge training in the context of rural development.

Schramm, Wilbur. *Mass Media and National Development: The Role of Information in the Developing Countries*. Stanford, Calif: Stanford University Press, 1964.

This work covers a wider range than the immediate concerns of our subject. However, of particular interest for present purposes is Chapter 4, "What Mass Communication Can Do, and What It Can Help to Do, in National Development," and Chapter 8, which lists a series of proposals for action with specific reference to "development information."

A volume which might well be used in association with Schramm for case material is UNESCO - IIEP *New Educational Media in Action: Case Studies for Planners*, Paris, 1967.

Staley, Eugene F. *Planning Occupational Education and Training for Development*. New York: Praeger Pbl., 1971.

This work, carrying the credentials of the Stanford International Development Education Center, the Ford Foundation, and the U.S. Office of Education, provides a brief and readable treatment of the subject of occupational education with particular reference to the private industrial sector in the developing countries. Staley distinguishes between *education*–"preparation of trainable people," and *training*–acquisition of knowledge and skills for specific jobs - a distinction which we do not make in the present paper as clear-cut as Staley does.

Of special interest here is Staley's discussion of "institutional choices" and of "organizational choices." The three most important lines of thought are:

"1. . . .The scope of institutional choices facing the astute planner is a broad one. Possibilities for constructive institution building are at least as numerous and significant outside the formal education system as within it. . (a fact) too often neglected in planning for human resource development.

2. A broad strategy is necessary for orchestrating the potential contributions of many agencies so that they supplement and harmonize with each other. . .(Staley believes that a coordinating "Occupational Training Office" is needed representing employers, workers, government agencies, and special educational and training institutions).

3. Effective linkage between the formal education system and the employment system, and between these and other relevant institutions and agencies, is . . to be sought and planned for." (pp. 105-6)

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Appendix C

Non-Formal Education and Literacy

As previously indicated, widespread illiteracy among adults and out-of-school youths is endemic in developing nations. Furthermore the developmental projections--in terms of objectives as varied as increasing agricultural production or fostering wider participation in political processes (particularly local government)--*cannot* be held up until everyone is literate. Fortunately almost everyone knows by now that illiteracy is not synonymous with lack of intelligence. In practical terms then, non-formal developmental activities have to take widespread illiteracy as given, and make adjustments accordingly. The process is awkward and slower than anyone would like, but the alternative of deferring developmental activities until everyone is literate is not feasible. Nevertheless there is no reason why literacy programs cannot be fostered concurrently, and in fact conjointly, with other development programs. The only caveat worth mentioning at this juncture is that *crash programs* focused exclusively, or essentially so, on literacy *per se* have been almost all failures, as well-meaning and humanitarian as their sponsors have been in fostering them.

For the materials which follow, the authors are greatly indebted to the succinct summary of the results of literacy programs in Iran, Zambia, Thailand, Turkey and Rhodesia, by John Oxenham,[1] a Fellow of the Institute of Development Studies, University of Sussex, England.

Research findings, as fragmentary as they may be, appear to support the following basic generalizations:

1. Adults generally acquire skills in reading faster than children, and at considerably less cost (other values held constant) than the costs incurred in producing literates in elementary schools. The same basic relationship holds true of learning arithmetic but to a lesser degree. In the acquisition of writing skills, the differences are, however, negligible. But the learning rates of adults are *not* homogeneous and are influenced by various factors as indicated below.
2. *Group* instruction is more effective than individual instruction.
3. Support by employers or the community at large, in the form of job promotions, increments in salary, support for leadership roles, or other similar rewards, fosters perseverance in attending non-formal educational programs and in ultimate success in attaining literacy.
4. Functionally oriented (work-oriented or life-oriented) literacy training is more successful, if construed by the learner to be supportive of and related to his wants and desires.
5. "...Virtually every literacy project in every country still starts out with enthusiastic over-subscription of enrollment. People would indeed like to be literate.

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1. Published under title of "Non-Formal Education Approaches to Teaching Literacy," Supplementary paper No. 2, Program of Studies in Non-Formal Education, Michigan State University, East Lansing, Michigan

However, the strength of their desire and its ability to carry them through to completion are still the uncertain factors."[2]

6. The perseverance of the participants in literacy programs is affected not merely by the content and style of the course, but by its duration. As to duration it appears to be less related to whether the course is long or short, intensive or drawn out, as long as it is *continuous*.
7. On the uses of literacy, Oxenham indicated that "From the history of traditional literacy programs and from the somewhat better records of the functional literacy efforts, it is evident that literacy instruction is simply not viable on its own, except for the few who know exactly and urgently what they want the skills for. Literacy, to be certain of acceptable success, must always be a part of a package. That is to amount to saying that the other components of a package are necessary to the literacy. *It does not say, however, that literacy is necessary to the success of the other components* (italics supplied) . . . The more abstract programs, for creating 'awareness' might be difficult for the illiterate to grasp or to respond to, whereas the opportunity for literacy is more tangible. To say this does not deny that literacy is a fundamental human right. *It merely recognizes that literacy is a means of access and that giving access to a virtual vacuum is unrewarding to givers and recipients* (italics supplied)."[3]
8. Commenting on questions as to whether, or which, development programs require their participants to be literate as a necessary condition of success, Oxenham differentiates between employment in the modern sector which may require "reasonable competence in at least reading and arithmetic" and activities in the rural sector. In terms of principle he enunciates that "the greater the prospective interchange with literate persons important to livelihood and welfare, the greater the need for literacy." Acceptance of this rule of thumb principle "might entail excluding literacy training from perhaps the bulk of rural projects which aim modestly at increases in the productivity of farmers or at small changes in the cooking habits of housewives."[4]
9. On the question of whether it is possible to use literacy instruction as a "bait" to gain other developmental objectives, the answer appears to be affirmative, at least in the case of programs in Thailand and Turkey. More specifically, it seemed possible in these two countries "to arrange literacy instruction so as to get questions of agricultural improvement, family planning, land reform, and so on, converted into live local issues, or even to get communities to call for government services that they had previously ignored."[5]

In light of these brief generalizations about a very complex subject, what "guides" might planners and other persons in policy positions follow in making determinations regarding this very important and complex aspect of non-formal education as related to the accomplishment of developmental and other purposes? The following are paraphrased from Oxenham's list:

1. The fundamental willingness of people to learn is aided and abetted by relating instructional programs to the attainment of more concrete and immediate (less remote) goals.

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2. *ibid.*
3. *ibid.*
4. *ibid.*
5. *ibid.*

2. Adults prefer and learn faster in groups.
3. However well designed a program of literacy training may be, the instructional methods had better not be dull, if interest is to be sustained for a long enough period to achieve results.
4. Courses of instruction should be given "as intensively as possible" without breaks.
5. The management aspects of literacy programs, "planning, forecasting, estimating needs, mobilizing the resources (finance, manpower, facilities, even time) synchronizing the inputs, nursing human relations, reconciling conflicts of agenda and interest"—must be given as much attention as planning the context or pedagogy of a program. Failure to attend to the management aspects of the twelve UNESCO experimental functional literacy projects resulted, in Oxenham's opinion, in classifying only two or three as productive of lessons "worth reproducing."
6. Programs of either a specific occupationally oriented or generally oriented nature need to be focused on the objectives and motivations of the learners. Because of the variability of needs, a variety of programs of literacy training may be needed.
7. Although experimental and demonstration programs of limited scope and clientele may best be fostered by private missionary or other organizations, even by energetic individuals with "one man bands," widespread programs reaching masses of people need to be fostered and financed by government agencies - hopefully less bureaucratically motivated and administered than is characteristic of other government programs. Perhaps in this area as in others, a mix of private and governmental efforts may be the only solution.
8. Although it may be generally recognized that in developing countries the role of expatriate personnel may have been critically significant in the past, present conditions require that expatriates operate more as resource persons than "idea and action" men combined. The area of literacy training thus appears to be no different from other areas of developmental activity.

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2. Historical Perspectives on Non-formal Education, Marvin Grandstaff, 180 pp., 1974.
3. Economics of Non-formal Education, John M. Hunter, Michael E. Borus, and Abdul Manan, 193 pp., 1974.
4. Non-formal Education in Ethiopia, Richard O. Niehoff and Bernard D. Wilder, 347 pp., 1974.
5. Alternatives in Education: A Summary View of Research and Analysis on the Concept of Non-formal Education, Marvin Grandstaff, 82 pp., 1974.
6. Case Studies in Non-formal Education, Russell Kleis, 430 pp., 1974.
7. International Training Support for Non-formal Education, Kenneth Neff, 34 pp., 1974. Out of Print.

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10. NFE: The Definitional Problem, Russell Kleis, C. Lang, J. Mietus, F. Tiapula, Ted Ward an J. Dettoni, 46 pp., 1973.

11. NFE and the Structure of Culture, George Axinn, William Kieffer and Marvin Grandstaff, 46 pp., 1973.

12. NFE as an Alternative to Schooling, Cole Brembeck and Marvin Grandstaff, 51 pp., 1973.

13. NFE in Ethiopia: Literacy Programs, Richard Niehoff and Bernard Wilder, 41 pp., 1973.

14. NFE in Ethiopia: The Modern Sector, Richard Niehoff and Bernard Wilder, 41 pp., 1973

15. NFE: New Strategies for Developing an Old Resource: Conference Proceedings, Kenneth Neff, 36 pp., 1974. Out of print.

16. Supplementary Paper No. 1: Alternatives for the Training of Skilled Industrial Labor in Sao Paulo, Brazil, Michael Lukomski, 96 pp., 1975.

17. Supplementary Paper No. 2: Non-formal Education Approaches to Teaching Literacy, John Oxenham, 16 pp., 1975.

18. Educational Alternatives in National Development Plans and Programs: Suggestions for Policy Makers, Harry L. Case and Richard O. Niehoff, 1975.

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